



# White Paper

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Wiz-Tec Computing Technologies Inc. Indian  
Tax Exemption Program Facilitated

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# Wiz-Tec Paper

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## Introduction

The greatest significance of the "Industry Revolution" was to use reliable automated machines where are to replace manual labour, resulting in significant cost benefits by simply replacing some people with machines. There is no difference in the advent of the "computer revolution", which began in the 80s, and continues on to this day. Where "Machines" and "Computers" are replacing humans to sustain cost effective operations, and result in significant reductions of overall cost, including significant benefits from far less risk of liability caused by highly problematic human errors.

Government tax and tax exemption programs fall into the category of benefiting from computer enhancement, although a government faces two significant additions added to its operations (regardless of whether or not they perform those operations manually or if they are semi-automated):

1. Abuse and fraud by either the retailers or Individuals participating in the program, both of which stand to benefit. Most of which are neither caught, nor possibly even known to have existed.
2. Disputes and liabilities resulting from attempted control and enforcement, e.g. the "assessment" collections or rejections. We classify it as "risk management", and it is a far more serious matter, which is not obvious or immediate in its initial stages. This often costs more than the operational cost.

Merchant Server is the "automation machine" specially designed to address and resolve all these problems, with central and machine enforced control. One can comparably reference to the electronic payment industry, Merchant Server is identical to the Visa/MasterCard/Bank system, with deployed devices at every retailer to enforce, validate and capture each eligible transactions real-time at the central server.

1. Significant reduction of labor intensive manual administration
2. Significant reduction of abuse and fraud
3. Significant reduction of disputes and risk of legal liabilities (cost of "risk management").

The brief definition of tax exemption is the "government" gives tax exemptions for "eligible individuals" on "qualifying products" purchased. The retailer is merely the intermediary. Merchant Server does the exact same process, in full compliance to treaty rights, deploying effective validation machines at the retail level to validate the eligibility of individuals and product qualifications in real-time at the government central server.

Wiz-Tec submits this unsolicited solution to invite the Provincial Government to take part in a fully automated, treaty compliant, secure, reliable and sustainable machine, the Merchant Server. To run your government ITE program; furthermore, it is completely self contained and totally self-funded at no risk or cost to the government.

## About Wiz-Tec

Its President and CEO, Jim Wang founded Wiz-Tec Computing Technologies Inc., in 1992. Wiz-Tec's home office is in Calgary, Alberta, Canada.

Since its inception, Wiz-Tec has engineered and distributed software products to over 1500 companies in Canada directly or through its associated dealers. It has also developed significant expertise in customizing and delivering technically advanced and sophisticated application software solutions for its clients including the Government, Fleet card companies, and small to median sized businesses.

Wiz-Tec has maintained its business focus and succeeded in the same industry through both favorable and difficult economical cycles. Consequently, it has gained expert knowledge and experience in its specialized area of business.

In addition to its POS and retail automation expertise, Wiz-Tec also has extensive knowledge and work experience in server-based authorization and data-capture technology for the banking and credit card industry. It understands the very detailed aspects of server-based technology implementation such as card security, encryption technology, public-key distribution, secured communication, embedded control etc.

Seeing the amount of abuse, and misuse, due to design and implementation flaws in this sector of technology, Wiz-Tec envisioned and initiated the development of the Merchant Server in 1997. A specialized server-based authorization and capture technology for Fleet card payment and loyalty programs. The Merchant Server achieves enhancements and perfection beyond any current industry standard. The result of this is Merchant Server having been customized and deployed for the Indian Tax Exemption program as early as 2003.

Some highlights of Wiz-Tec's history are summarized in the following:

1. Deployed over 1500 POS applications since 1992.
2. Designed and implemented private label fleet card payment applications which are captured in our POS technologies, and various batch based host communication mechanisms for the gas retail industry as early as 1993. The majority of our chain retailers are still actively using our applications and software as an effective method of fleet control and data collection.
3. Developed various data capture and loyalty systems with most of these applications still in use today. Examples include the Federated Coop Patronage Points Program, the AirMiles™ Program etc...
4. Wiz-tec is or has been certified with most Canadian (and 2 US) financial institutions. Some of the banking projects include CIBC, Scotia Bank, Bank Of Montreal, and most recently Moneris™ (Royal Bank and BOM) Banks for the integrated POS debit and credit processing application with the latest VPN and public SSL technologies.
5. Developed unattended pay at pump technology since 1995, a pioneer in computer automation with real-time control, capture and electronic payment. Only a very few Canadian companies can successfully support this technology.
6. Developed and deployed several customized tax exemption claim systems utilizing POS. These types of deployment have been occurring since 1995. Examples include paper based Indian Tax exemption software for BC and Ontario and the Alberta Farm Fuel Tax Exemption Program (AFFDA) for Alberta.

7. Certified with the Alberta's Indian Tax exemption for electronic claims since 1999.
8. Developed and demonstrated the first of its kind real-time fleet (private credit) card processing system named Merchant Server in 1988.
9. Implemented Merchant Server and its associated POS technologies to provide a 100% end to end solution for the Nova Scotia Indian Fuel Tax Exemption Program (NSIFTE) in 2003 (Nicknamed NIFTY by the Nova Scotia Finance department).
10. Designed and engineered the first of its kind "Wall Mounted" Automated Gas Teller™ to provide a low cost alternative to Retail Gas vendors with a low through-put volume who does not wish for the more expensive upgrading to the Pay at the Pump technology in 1999. An important milestone for Wiz-Tec because this technology demonstrated Wiz-Tec's ability in the field of embedded control for reliable automation in all weather conditions.

Wiz-Tec has been so successful and reliable in its software development that we still have customers using software we made 15 years ago.

**Jim Wang, President, M.D.**

Jim Wang graduated as a Medical Doctor from Beijing Medical University in 1987, with a keen interest, and demonstrated skills, in computer technology and applied mathematics. Jim successfully designed, and marketed his invention of a computer automation device even before graduation from Medical School. Jim is also a past recipient of many scholastic awards from his University and the Department of Health of China. Jim came to Canada in 1998, with a desire to explore new opportunities for himself and his wife, a Medical Oncologist practicing at the Tom Baker Cancer Center.

**William Macdonell, VP, Operations and Corp. Development.**

With a strong background in Wireless and Internet applications, Bill brings 20 years of experience in project development, implementation and marketing. Bill has served as Chairman and sat as a Director on the boards of several companies, and in 2003, began to work with Wiz-Tec Computing Technologies Inc. Combining his product knowledge, operational skill-sets, and marketing skills with Wiz-Tec's dynamic product offering. Along side his duties at Wiz-Tec, Bill is currently completing a Bachelor of Science degree in Computer and Information Technologies.

## Objectives and Outcomes

### Situational Overview - Major Challenges Current ITE Programs have to overcome

Wiz-Tec, through its work with the NSIFTE Program, and the AITE AND SITE program, has identified a serious deficiency in ITE programs nationwide, which it seeks to address through the co-operation of the Crown, to the benefit of the Crown, the First Nations, and Wiz-Tec Computing Technologies Inc.

From a technical point of view, processing electronic tax collection and exemption is not much different than processing done by credit card and banking payment systems. It provides server based accurate and secure validation, processing and capturing, which is what Wiz-Tec's Merchant Server design and implementation has been based upon since 1997.

The fundamental principle of the Indian Tax Exemption is, under various treaty agreements, that the eligible participating First Nations member purchase goods tax exempted (charged by the government) for individual consumption while on reserve. This applies to both federal GST, provincial PST, and in particular to provincial tax levies on Fuel and Tobacco. It is a matter of an Individual receiving his/her tax exemption right under treaty, and the government acknowledging and rebating tax exemptions to the qualified Individuals. Retailers are the intermediaries of such tax exemption tasks on behalf of the government for eligible individuals. We can equate the retailer to a shipping carrier, who acts as a cargo carrier between for the sender and the receiver. Currently, most ITE programs, due to a limitation of availability prior to our Merchant Server technology, have been negotiated between the government and retailers or bands in the form of quota systems, which allow the respective government to budget, and formulate risk management numbers for the purpose of budgeting.

This methodology to date has caused many disputes, and its net effect is to promote abuse in and around the various programs, which creates conflicts for treaty compliance.

We have communicated the deficiencies of existing programs to various levels of Government. Unfortunately, governments, whether having identified issues or not with their various programs, have been constrained either by budget necessities, or by policy issues related to the implementation of a proper electronic program for the First Nations.

The following can best sum up the specific issues identified:

1. For those Governments, which do not have electronic tax claim systems, processing manual paper claims becomes a labor intensive task with high expenditure and zero return for the Government. In addition to having to process manual claims, this processing activity automatically generates human error occurrences, which further result in auditing, disputes, and potential lawsuits.
2. Governments, which already have an electronic tax claim in place like AITE and SITE, are only partially deployed (around 50%). Consequently, manual claims can not be effectively eliminated. This process continues on top of additional resources, which are allocated to manage electronic claims. The result of the electronic component is actually minimized in an effort to compensate for the manual processing.
3. An Electronic tax exemption claim automates the claim process, with the main purpose being to make the tax exemption much "easier" to manage for the individual user, the retailer, and the Government. Improperly implemented, automation actually defeats itself by also making abuse and false claims much "easier". An example is the current manifestation of the AITE and SITE systems, which were custom designed based on very old technologies. These technologies have many design flaws, and were designed without serious consideration for security, abuse, fraud, fault tolerance, etc.

To expand on this, the fundamental problems of ITE programs in general are:

- An inability to eliminate labour intensive manual paper claims. The design of a conventional program does not allow for 100% penetration for electronic automation, nor can they be easily adapted and upgraded. Dispute rises not only from the deficiencies of the AITE and SITE programs, but also from the human oriented manual paper claims.
- Inability to control and eliminate abuse and various forms of fraud. The design relies on a cashier, working on inaccurately synchronized offline data for I.D. and purchase validation, without any security and privacy protections
- Inability to control and minimize the risk of liability. The control and enforcement relies and targets retailers (many owned by the Band), which are the source of disputes and lawsuits when denial of exemption payment occurs "after the fact".

***(For a better understanding of the inherent flaws and weakness' of the AITE and SITE models, please refer to Appendix E)***

### **The Objective of this Paper**

The objective of this unsolicited Paper is to deploy a known and proven to be effective, secure, highly penetrable, and sustainable Visa/MasterCard-like system into government Indian Tax Exemption programs, at minimal or no cost to the government. Namely, Wiz-Tec's Merchant Server Program, which has had proven success and proven results in Nova Scotia over three years, and is fully automated without any disputes or lawsuits.

- A system that allows maximum penetration and effective elimination of labour intensive and troublesome manual administration
- A machine enforced central server based in real-time and highly secure, to effectively minimize abuse and fraud
- A minimal cost, dedicated, server controlled "thin client" validation machine to effectively enforce I.D. validation for eligibility
- A effective, highly accurate, and secure control and enforcement mechanism to minimize the potential cost of disputes and liability
- A design and implementation that allows for long term sustainability, and can be continuously modified and enhanced with minimum or no impact on the ITE operation
- A self-contained and self-funded ITE program that bears no direct cost or risk to the government

Tax is the only means of income for the government. Without question, Merchant Server is a revolutionary design meant to bring the future of government tax administration into reality. It is a sophisticated Visa/MasterCard like "machine" for governments, which allows for tax collection and exemption automation. Undoubtedly, after having proven success in the Canadian market place, Wiz-Tec would expand further to bring this technology to the rest of the world. Although Merchant Server is fully capable of tax collection, this Paper is primarily focused on **Indian Tax Exemption**.

Wiz-Tec, as a result of the successful deployment of the Merchant Server Program in Nova Scotia (NSIFTE) and undeniably successful results inherent in that deployment, chose to attempt to market the Merchant Server program to other provinces. As a result of attempting to market the

program, Wiz-Tec encountered varied reasons for reticence on the part of any particular Government.

Some examples of the reasons for holding back, or attempting to consider a program such as this can be summarized in the following:

**1. The Government does not acknowledge, or perceive there to be any problems such as false claims, fraudulent claims, or building resentment in the program they employ.**

There are many factors which can come into play, from a bureaucracy essentially set in its ways, working under the misconception that if it isn't broken why fix it. Denial is obviously the easiest method of administration, and "managing the problem" becomes the next logical step to "fixing the problem".

Part of the reason for denial is because it is unknown. There is no mechanism in place, nor enough information collected, and not enough evidence to produce a successful prosecution.

In the case of tax collection and exemption, there is no doubt that Governments recognize the possibility of abuse and fraud. Unfortunately, they deny and dispute the significance and quantity, preferring cost justifications for "risk management" via policies and quotas until "managing the problem" becomes problematic and unmanageable. Through trial and error, partially fixing the problem (for easier electronic claims alone) as has been the case in AITE and SITE, also created new sets of problems without actually successfully removing the old.

For a Government in a country like Canada to be using what amounts to pre-industrial methodologies to facilitate a claims program in a technological world, is simply a denial of the obvious.

The fact of the matter is that without an effective ITE program running in real-time, fraud and abuse will remain an unknown and leave the government in denial. Even for AITE, SITE, and other provincial ITE programs, partial and limited information is collected and cases are suspected, but there is not much that can be done. Bluntly put, there is no effective validation, control and enforcement at the time of the occurrence. Attacking the retailer is wrong because they are not going to provide evidence proving themselves to be the offender. Post action after the fact simply devolves into disputes with serious legal and political side effects.

Regardless of whether it is 5% or 50% fraud, it may never be known without a Merchant Server type of system to produce confirmation. This is why Wiz-Tec is so aggressively proposing this model of our program. There is no risk, and no cost to a Visa/MasterCard type of system to overcome this uncertainty. If we were wrong, Visa/MasterCard would not have invested \$17 billion to develop their systems since the 70s, nor would they be enforcing new 2010 compliance standards, which we have already developed.

Using proven design and implementations stemming from the credit card and banking industry, with true treaty compliance, Merchant Server is the solution to fix the problem at its root.

**2. The Government has a desire to implement a program, but lacks the budgeting capacity to initiate a true real-time program with the security features necessary to control the tax exemption for Fuel and Tobacco.**

Budgeting is always an issue for Government, and understandably, no matter the merits of any one program being automated, there is always a long list of priorities. Instead of investing in machine enforced automation, the government tends to fall back to resource and labour based management tools. Instead of understanding and fixing a problem at its roots, the government

tends to manage problems. In the context of the cost of an Indian Tax Exemption program, the cost may be such that it simply is not worth looking at versus the merit of another priority.

It is not that the Government does not want to automate the Fuel and Tobacco claims, there are just other matters which are more essential, or politically more attractive to deal with first. This is understandable from Wiz-Tec's perspective, and has meant that Wiz-Tec, in order to further its own agenda, must come up with a ways and means which is more accommodating to the Government.

Populating our success in Nova Scotia to the entire nation would result in hundreds of millions of dollars in accumulated savings to the governments. The difficulty Wiz-Tec faces is still the budgeting for expenditure and argumentative politics and policies inherent in dealing with First Nations.

***Wiz-Tec has now established a business case as an alternative that requires no budgeting or cost to the government, even as it provides great benefit to the government, while requiring little or no policy negotiation with the First Nations.***

Wiz-Tec will host, deploy and run the entire ITE program on behalf of the First Nations and the provincial Governments for their electronic tax exemption claims at industry standard cost, and invites the governments to participate. As the most significant beneficiary of the program, we look to the government for maximum assistance in deployment. By basing the program on the Credit card industry, and the standards deemed acceptable to the retailer sector, we believe a 2.5% gross transactional cost charged solely to retailers, will be cost beneficial enough for all retailers to participate.

### **3. The Government encounters great resistance within the first nations when imposing policies in and around tax exemptions**

One of the fundamentals of treaty rights has been that eligible First Nation's members may purchase qualifying products (tobacco and fuel) tax exempted. Because of a lack of mechanisms and technology, the government has negotiated policies around the retailers and band based on either a retailer rebate or "quota", neither of which are in compliance to the treaty. This has resulted in many disputes.

Up to the time of this document being published, without Merchant Server technology, the governments have had no choice but to dispute around the policies, as a means of "managing the problem" rather than fixing it. "Managing" a problem is not fixing the problem, and the consequence is that there will be more disputes and problems to manage. Almost all these problems and disputes can be traced back to the defects and inaccuracies of the original policies created in an effort to achieve compliance to the treaty.

To eliminate all policy disputes at their root, Merchant Server does exactly what the treaty requires, using machine and real-time servers to validate eligible Individuals and qualified products, as well as to calculate and provide tax exemptions to the individual at the time of purchase. As long as sufficiently eligible I.D. can be validated, the qualifying products purchased will be given tax exempted "electronically".

There is no policy other than the treaty, and all the government has to control is eligibility for individuals and products, which will eliminate abuse and fraud. There is no reason for disputes among retailers and Bands, because there is no policy other than the treaty in relation to individual treaty rights. The next immediate result will be, with effective machine enforced server controlled eligibility validation, to eliminate non-First Nations participants from receiving tax exemptions. The inherited benefit would effectively minimize the liabilities that arise from disputes, and various forms of fraud including false claims and electronic fraud.

To control retailers from purchasing tax exempted goods for resale, or selling non-tax exempted goods for exemption claims, the government may choose to require each retailer to enter their exemption product purchases. The Government may further enforce policies to non-Indian suppliers by requiring the supplier to enter their tax exemption products sold to retailers, using the same iPOS devices or a CD. In this manner, Merchant Server is able to capture the data for comparative purposes. The result is maximized government control.

For governments that might be constrained by policy or agreement disputes on tobacco with First Nations, Merchant Server can be deployed for fuel only at the initial stage and later expanded to tobacco with minimal effort.

Given that in this scenario the Merchant Server complies with treaty rights, it by default empowers the government to re-negotiate and settle existing policy disputes effectively, in accordance to the treaty.

#### **4. The Government perceives resistance on the part of First Nations especially when Tobacco is involved.**

Black-market production of Tobacco is a known, and growing problem, which when confronting the First Nations is an effective way to end any potential discussion relating to modification of existing policies regarding Tobacco or Fuel.

Black-market tobacco is not a tax exemption problem, unless they were distributed via retail channels on reserve, which is exactly what Merchant Server can prevent by enforcing product and retailer purchase (and/or supplier distribution) validation. We believe that black-market tobacco is largely (or a significant percentage of it) distributed via retail channels instead of on the street.

This further proves why Merchant Server is important for this matter. It is a fact that black-market tobacco, including tobacco produced and supplied by First Nations, (not charged with tax when supplied to retailers) are not subject to tax exemption. Merchant Server has a designed mechanism in place for this type of occurrence. The government may mandate that retailers enter and submit all tobacco purchases, which in turn is electronically captured by Merchant Server. The Government may receive resistance because the retailers are on federal land. However, the response by the government may be to deploy policies to all legal tobacco distributors, which can be regulated off reserve to submit and capture all their wholesale distribution to retailers. When this policy is utilized, Merchant Server will capture all three components (sold by retailers, received by retailers and wholesale supplied to retailers) and generate cross-tab reports on a monthly basis. This gives the government some control mechanism for illegal tobacco trafficking on reserve where police enforcement can not be achieved.

We seek not to apply some sort of regulatory control upon the production of illegal tobacco, rather we seek to legitimize the rebate on legal tobacco.

By implementing the Merchant Server program, we are effectively eliminating the false or fraudulent claimant from receiving benefit where no benefit is due. A properly implemented program does not require nearly as much policy negotiation, nor is it a means of capping the personal exemption entitlement of a member of a First Nation.

By tracking the bulk sale of tobacco to a reserve retail operation, and comparing the claim activity to the original stock purchase, the government is able to identify not just false claims, but the actual amount of black market tobacco being curbed out of the store.

By the denial of the claim for the sale of black market tobacco, the government forces the black market activity out of the retail operation, and into the street. It is easier to impact enforcement when it is on the street, than when it is hidden behind a legitimate storefront.

**5. The Government disputes the effectiveness of its existing ITE program invested, and has fear for risks and loss of control for any new programs specially when dealing with sensitive Indian matters.**

Discounting disputes and lawsuits derived from flawed design and implementation, AITE and SITE proclaim they have achieved objectives which are highly debatable to other provinces, and as such an inhibitor to engagement of an ITE program. For AITE and SITE, which are both concerned with their sustainability, problems further extend to cost and political justification of investment into an already existing ITE program.

The reality is the NSIFTE (in Nova Scotia) is the only one producing proven results in effective control and trouble free management of an ITE program without any disputes or lawsuits. (Note NSIFTE is fully tobacco ready but is not currently processed through the system because of their prior lawsuit settlement)

When you compare the much more enhanced "New" Merchant Server system in relation to existing provincial ITE programs, it is no risk versus serious disputes and lawsuits. Further to this, there is no cost versus the cost of risk management, treaty compliance versus policy enforced treaty, or even maximized individual level control versus no control or "out of control".

In terms of administration and operation under the new Merchant Server program, the control at the individual level is fully automated, the risk and disputes are distributed and dissolved into much smaller pieces, with the final resolution being an individual's manual claim, as opposed to a retailer or Band Entity lawsuit.

**6. The respective Government believes itself capable of designing technologies necessary to create an electronic program.**

Simply put, departmental IT staff are not in this industry, and they simply do not have all the necessary components ready, nor are the components easily acquired. As such it is not reasonable to expect them to truly understand, design, implement and deploy a solution such as this. Without the combination of design and engineering experience, the anticipated result becomes the unknown, which becomes a very costly scenario relating back to the "risk management" of re-design and re-engineering. The government is in the management business, not engineering, automation, production and distribution.

When one is "reinventing the wheel", the cost of learning, trial and error are high. Outsourcing an existing solution would be the logical choice. There are 3 known electronic ITE systems existing, the AITE, SITE and our Merchant Server based NSIFTE. AITE and SITE are custom developed, and even were they to be freely available could not be easily adapted to another province, nor would free distribution resolve the known problems and limitations within their programs.

The proposed Merchant Server system is a much more enhanced solution going above and beyond the successful NSIFTE.

Would it not be easier, if available and cost effective, to simply buy Visa/MasterCard servers, and certified PinPads to customize and adapt to the program (note, Visa/MasterCard do not own any PinPad devices, nor do any banks)? Bearing in mind that Visa and MasterCard are bigger than the biggest bank in Canada, in fact, on a gross revenue basis, they are bigger than

Canada in GDP with peak processing of \$26 billion on a busy day. In fact, in terms of Gross Product, Visa International alone would be considered the second largest economy in the world with over \$4.5 trillion dollars in transactions annually, and that does not include Interlink and China.

Merchant Server has been designed on the exact same fundamental premise as the Visa and MasterCard Programs since 1997. Regardless of its size, whichever players involved are the same due to its very narrowed market size, Wiz-Tec is the only has all the design, engineering, proven components and deployment success, period.

Simply discounting the complexity by discarding and oversimplifying critical components via policy enforcement has resulted in both problematic AITE and SITE programs, or years of impaired action.

The problems faced by AITE and SITE are a derivative of their proprietary designs, which after 5+ years of running have more than made apparent their fundamental design flaws. They achieved partial success in penetration, and perhaps an easier electronic claim capture which had the net effect of making abuse and fraud easier as well. Truly, both programs have reached their limit for control and enforcement, which is no where near effective enough as evidenced by a high occurrence of disputes and lawsuits.

## Merchant Server Components

### How would Wiz-Tec achieve an Automated ITE Program For your Province using Merchant Server and IPOS solution?

The principle is in the Merchant Server design and implementation. By duplicating the proven to be successful Visa/MasterCard and banking industry claim capture methodology, Wiz-Tec is able to use machine enforced devices and central server controlled processing and capturing to securely validate eligible individuals and qualifying products. It makes filing tax exemption rebate claims easier for the retailer, and the rebate itself is delivered directly to the individual First Nations member at time of purchase in real-time.

There are many features around Merchant Server in related documents, Wiz-Tec will only explain the mechanisms relating directly to ITE.

Merchant Server is, in simple words, a "Visa/MasterCard" server for ITE. It is a client-server application, designed specifically for claim authorization and capturing.

Physically, Merchant Server consists of the following components:

- **Merchant Server Core**, the processing server, with advanced clustering (multiple CPUs), replication (over multiple central locations), and load balancing.
- **ADR communication server**, which is dedicated for communication transmission formats (VPN, Internet, dial, wireless...). Modest securities are employed including SSL (public key encryption), AES data encryption (American Encryption Standard), and AES based digital signature for packet transmission.
- **Agent Server** that is specifically designed for security including SSL/AES public key publishing and validation, data encryption and decryption, PIN number (if used) security and validation, and data integrity validation.
- **Automation Server**, specifically designed to co-ordinate, and automate processing tasks. It is also responsible for logging and automatic fault recovery, automated backup and so on.
- **Management Server**. This is the interface component, which allows interaction to manage various government servers. These interactions include accepting eligibility data, submitting payment claims and so on. It has a console component (MSConsole and MSCLinet), which provides routine management tasks, data entry, member limit and Pin number management, and data queries. Its report server component provides various reports to different clients. Its Merchant Web component provides interface to Merchant login and detailed processing reports.

Merchant Server, although capable of supporting batch-based claims, is a server and central based real-time processing server

### What is IPOS?

IPOS is an embedded application appliance specifically designed for Merchant Server. It is designed as a low cost "thin client" device, that is, under business terms "disposable" or "dispensable". Embedded appliance means a dedicated device. The most significant features of IPOS related to ITE are:

- IPOS is multi-platform. It runs under Windows but does not require Windows or any OS (Operating System) at all. It is all self contained, distributed and run from a CD.
- IPOS can be deployed on a PinPad like device. This device can be a "mini-size" embedded-PC without any unnecessary components other than CPU and software
- IPOS uses all modern technologies, including various means of communication (internet, VPN, wireless, modem, firewall tunneling and so on), with SSL and AES encryption and security
- IPOS interfaces with all required devices, such as a laser scanner, printer, mag-card swiper, iButton or Smartcard reader, touch screen, pump controller and so on. When Pin number entry is used, it interfaces with a variety of Pin Pads (essentially the same as the bank uses) for customer Pin number entry.
- IPOS will interface with other POS with an "open protocol", just like the Banking and Visa/MasterCard industry, it is **NOT** POS dependant. Wiz-Tec provides interface drivers not only easier for 3rd party POS to interface, but also provide isolated layers to remove the POS dependency in case future modifications or upgrades are required which can be central managed via this compatibility driver.
- IPOS is extremely low cost (like a Pin Pad), and free when distributed on a CD, thus Wiz-Tec can achieve 100% compliance and complete elimination of the manual paper process.
- IPOS firmware can be remotely upgraded from the Merchant Server, for any changes or enhancements according to new policy.
- IPOS is real-time and support SAF (Store and Forward)
- IPOS will interface with either or the provincial and federal Indian status I.D. card
- IPOS validate multiple types of cards simultaneously , automatic rerouting troubled connections, and process via multiple Merchant Server hosts
- IPOS is bilingual

The combination of Merchant Server and IPOS creates a 100% end to end low cost solution comparable to a Visa/MasterCard system into the ITE program.

The most significant part of Merchant Server is its design compliance to Visa and MasterCard processing standards, what AITE and SITE should have been designed for and implemented accordingly as. It address's all the current AITE and SITE deficiencies, with maximum privacy and security, over various modern communication carriers, in real-time with maximum accuracy. Denial or acceptance of claim is real-time, at time of purchase, to the individuals who make the claim (not the retailers) and is validated by the PinPad (IPOS) not the cashier.

#### Feature Comparisons chart between AITE and SITE and Merchant Server/IPOS

	AITE/SITE	Merchant Server/IPOS	Advantage
<b>Accounts</b>	Multiple sites synchronized and maintained daily at each	One central database maintained at server	100% accurate according to server.

	POS		
<b>Communication</b>	Server Initiated	Client Initiated	Industry standard according to the Banks
<b>Claim capture</b>	Post processed at Server after the actual transaction	Real time at Server at time of purchase	Industry standard according to the Banks
<b>Declines or rejections</b>	Post processed, denial of payment to retailer	Real time at time of purchase, denial of exemption to the individual	All legal benefits
<b>Validation Process</b>	Phase 1 validation by multiple vendor POS software and cashier to individual	Through IPOS acting like a bank PinPad device. Single phase real-time at the server for validation and exemption.	Industry standard according to the Banks. Validation and delivery integration protocols
<b>Exemption Process</b>	2 phase exemption rebate or rejection to retailer	Single phase real-time server for validation and exemption. Exemption delivered to individual via retailer.	Industry standard according to the Banks. Validation and delivery integration protocols
<b>Transaction record format</b>	Descriptive, multiple record, multi-level, file based, without any detection or validation	Request-response, transaction record based, each with digital signature	Industry standard, with error detection
<b>POS</b>	100% POS dependant	Standalone, interface with 3rd party POS	No POS vendor dependency.  100% penetration possible.
<b>Comm. Carrier</b>	Single proprietary software (Blast or PCAW) over phone/modem	TCP/IP, Web, modem, wireless, DSL, Cable...	No limitation on reach to a reserve site.
<b>Comm. Security</b>	Non secured	Full AES and SSL encryption security	Industry standard according to the Banks
<b>Exempt Limits</b>	Global/All	By Individual based on per use	No Policy against Indian Nations
<b>Privacy Info.</b>	Published and Distributed at each retail. High risk	Server/Central Based.	Industry standard according to the Banks
<b>I.D.</b>	Barcode or Manual	Mag-stripe, Barcode, Smartcard, iButton,	No denial of service to out of province or

		Manual	multiple card platforms
<b>Server and Retail Policy</b>	POS based and POS dependant at each retail. Extremely hard to implement new policies	Flexible, server based, single point	Change policy on the fly.
<b>Retail Upgrade</b>	POS vendor over multiple re-deployment	Server managed. Real time remote connection	Change format on the fly.
<b>Manual Entry validations</b>	None	Optional for manual entry or over-limit purchase, by issue date, expiry date, phone number, birth date or Pin number. Static or server random via challenge-response	I.D. security against abuse and fraud
<b>I.D. Pin Number</b>	Impossible	Built-In, flexible	Allows for flexible management criteria
<b>Retail Cost</b>	Full POS  \$10,000 to \$30,000 per lane	Minimal, \$3000 or less	No expensive outlay to Government for participation or compliance.
<b>Validate Retailer Purchase</b>	AITE yes. SITE no.	Yes, optional	Control of retailer oriented abuse
<b>Validate Supplier distribution</b>	No	Yes, optional	Control of retailer oriented abuse
<b>Penetration for 100% compliance</b>	Difficult, costly and complex POS	Possible. Various forms low cost or no cost without POS dependency	Government can mandate policy based on full compliance
<b>Exemption delivery</b>	To retailers	To eligible Individuals via retailers	Government is rebating the correct amount, with no dispute.
<b>Treaty Compliance</b>	Partial, disputable policies	Yes	
<b>Long term sustainability</b>	Difficult and costly	Yes. Flexible and expandable at server, central controlled	

## **What is the expected outcome of implementing a Wiz-Tec Program**

The expected outcome is a fully implemented electronic claims program, which will minimize false claims and abuse of an ITE system. The benefits to the various parties involved can be summarized as follows:

### **Benefit to the Provincial Government**

- **To utilize a truly treaty compliant ITE program:**

The new government policy is fully treaty compliant, delivering tax exemptions directly to eligible individuals via retailers without disputes. There is no denial to eligible individuals and retailers after real-time validation, approval and capturing at the central server. Rejected claims are only to individuals at the time of purchase, due to insufficient I.D. or individual limits. These types of claims can be post processed after providing sufficient I.D. and reasons, or by immediate contact of the provincial treasury with further proof of validity in the claim, where limit and claim can be adjusted and accepted in real-time.

Eliminating conflicts between policy and treaty would effectively minimize disputes between the government and the First Nations, with the added benefit of easing the tensions among Indians, Bands and Retailers against the government.

- **To streamline and fully automate ITE claims accurately and securely:**

The new program will be fully automated using machine enforced real-time validation and acceptance policies controlled at the central server. The management and control of the entire ITE program will be shifted to administering the central data, instead of traditional paperwork, offsite problems, and post-claim disputes.

- **To effectively control and minimize abuse and fraud:**

The new program is not about control of First Nations Members, or about denying those members from purchasing tax-free goods. It is about non-First Nation's individuals abusing or pretending to be members of the First Nations in order to receive tax-free goods.

This is an issue of the "common good", which costs all taxpayers money. In contrast to the existing system, the new system will better ensure that First Nation's members, and their retailers are the only beneficiaries of tax exemption. This essentially reinforces their distinct identity, and their special status rights as the First Nations.

The new program will be the most accurate and reliable way to ensure this. The old systems have been problematic and less reliable. .

Individual limits are imposed and managed based on an individual basis, to prevent possible individual abuse. Sufficient I.D. validation is enforced (especially to control manual entry with additional entry or optional Pin numbers) to eliminate possible individual abuse and retailer false claims.

This actually serves the First Nations better, both physically, and in political mileage, by presenting the First Nations as willing to ensure that the taxpayers of (Put Province here) are being protected from fraudulent abuse of the treaty rights

- **To respect and manage individuals for treaty rights:**

Essentially, a Wiz-Tec Merchant Server program will allow the Government to abandon the quota system and policies which conflict with Treaty rights. This is the primary bone of contention stimulating lawsuits. There will be no need for a universal policy with limit restrictions (e.g. 3 carton per week), but rather a system based on individual needs and usage (Individual quotas). The new program puts the Government in a position to provide as much as an individual requires to satisfy their needs, without allowing non-First Nations to piggy back on claims.

Managing exemptions at the individual level not only denotes respect with regard to each individual's Treaty rights, but also to diffuse disputes into much smaller pieces, i.e. less political and financial risky components. For those with reasonable demands for higher purchase limits, they can be entertained and further flagged for Pin Number entry for better security.

- **To ensure maximum security against fraud and Indian privacy protection**

Unlike AITE and SITE which publish and distribute the private information of a First Nations Member to each retailer computer hard drive, and transmit data and claims over unprotected wire in plain text, Merchant Server never populates private information from its server and uses above-industry standard encryption over secured lines to achieve maximum security. Privacy violation, false identify and electronic fraud are potentially serious liabilities to the government.

- **To ensure sufficient and adaptable I.D. security**

Merchant Server hosts and supports multiple I.D. references, which can adapt to multiple forms of I.D. at the same time. Regardless of whether it is a barcode, mag-stripe, SmartCard, or iButton. At the same time, the system will allow for ID in the form of a provincial status card, federal status card, or driver's license and so on. This provides maximum flexibility and adaptability in various potential migration paths.

This also allows provinces a migration path to participate in cross province and/or federal Treaty card programs in the future. For a province which does not have sufficient I.D. security, additional server based "challenge-response" validations (random entry on issue date, expiry date, birth date, phone number and Pin number) can be utilized on conditional transactions to achieve maximum I.D. security. A secure Pin Number is deemed the most effective I.D. security to achieve a banking industry standard, which Merchant Server supports at a much higher security level, but can be configurable on a per individual or transaction basis.

- **To ensure retailers are protected and properly controlled:**

Unlike AITE and SITE using a 2 phase process where validation, exemption, rebate and capture are not synchronized, the new program is a single phase real-time process, with a dedicated online device, validated, processed and captured at the server. Every accepted claim, once validated, will be rebated to the retailer, and every rejection is denied to the individual in a manner that will allow that individual to re-file with a produced receipt and sufficient I.D. and substantiated reasons. Retailers are not the tax exemption recipients, retailers are the portal to the carrier to the government to deliver exemptions to individuals. It is to the retailer's advantage to carry an ITE product line, as his competitors might not.

At the same time, to gain maximum control against retailers engaging in possible abuse, such as making false claims or distributing black-market tobacco, the government may force retailers into entering purchasing volumes. The alternative would be to regulate suppliers and have the supplier submit distribution volumes to be captured and reported by Merchant Server to cross compare against a retailer's claims.

- **To ensure maximum participation and compliance**

Other than standard low cost iPOS devices, various flavors of remote operations are entertained from the minimum of a free iPOS CD and telephone line, to iPOS driver isolated complete POS/Pump integration, from dial-up to wireless, from Windows to Linux. This allows maximum penetration of the ITE program to achieve majority participation, or government regulated (or funded by distributing a free CD or a low cost device) compliance. This is the most effective mechanism to completely eliminate manual paper claims, which provides infrastructure and operational benefits.

- **To ensure long term sustainability of an ITE program**

A successful ITE program would not be sufficient without long term sustainability. In order to achieve long term sustainability, it has to be completely centrally managed with minimal POS dependency, and fully adopted.

Under technical terms, it should be a server based thin-client distribute application architecture. Merchant Server is designed to be so, with no POS dependency, deploying low cost remote clients dedicated for its tasks. Intermediate interface and isolation drivers are provided for 3rd party POS integration to empower retailers, while at the same time removing dependency via this compatibility layer.

The deployed firmware can be remotely modified or upgraded from the central server to adapt and enhance the entire ITE program with minimal impact and cost. In the case of a required physical deployment upgrade, e.g. changing from provincial barcode to mag-stripe (federal status card or provincial driver's license), the deployment is only limited to the device level, not (POS or PC) the system level, where firmware functions are delivered electronically by the server.

Further, there is no POS market to consume and service deterioration, because the sustained ITE program is the funding source of the business itself.

- **Risk free and fully viable deployment**

There is no cost or risk. No budgeting required other than the reallocation of some of the existing ITE resources for the new automated ITE operation. There are no disputes or lawsuits, where demands are entertained and determined at the individual level on a per case basis. There is no conflict between policy and treaty, there are no rejections to retailers or eligible individuals.

All the necessary components required in a program are built-in and ready for deployment. All the government has to do is to participate and operate.

After initial evaluation, the entire program can be later budgeted and purchased at a determined cost within 2 years, or reevaluated for commodity value after, or be left indefinitely until the government is ready or feels a need.

**What is the advantage to the retailer:**

- Once validated and approved, there are no rejections or short paid rebates. In the case of a rejection, the full amount is collected from the individual and a receipt is produced for the individual to file a manual claim. In simple words, there are no rejections, there are no short payments, there are no disputes against the government.
- Faster and accurate rebate cheques every week, which is critical cash flow for a retail business.
- Easier tracking and administration of rebates. Electronically retrieve up to 12 months of historical transaction detail, as well weekly rebate totals. The retailers can focus on running their business which is what they are designated to do.
- Faster and responsive support, on a simplified depot device replacement service, it is Wiz-Tec's and the government's primary benefit to ensure successful and continuous operations.
- The 2.5% gross transactional charge is merely a part of the cost of doing business, which can be embedded into the retail prices, and is no different from what Visa/MasterCard would charge.
- The Retailer has a full range of choices to participate or not participate, at a minimum startup and re-occurring cost, and the program can be fully integrated into their existing POS as they wish.
- No dispute from individuals, as validation is at the real-time server and is machine enforced. For those rejected, they can take the printed claim receipt or make direct contact with the government to resolve the status of the claim immediately. Either way the deemed amount is fully collected at the time of transaction regardless of whether it is from the individual or via government guaranteed rebates.
- Optional, other benefits (See Q&A).

**What is the advantage to the Band itself**

- Because this new program is truly treaty compliant, the band insures that its members are accorded all of the treaty rights due them, without prejudice, or interference.
- Because this new program is truly treaty compliant, the band will no longer have to deal with the complaints of individual members, as a new, more effective resolution path has been created. This is a path, which is transparent, and accountable to the people of the First Nations.
- By entering into the program, the band will provide its retailers with new technological options and alternatives at their stores. The retailers will be able to take advantage of the program, without being held hostage to a few select POS vendors.
- By agreeing to this program, the Band can show the program as a political victory to its members. Everyone likes looking good.
- Optional, other benefits (See Q&A).

**What is the advantage to the First Nations as a whole;**

The First Nations can stand up and state clearly to the rest of the nation that measured, negotiated, and principled solutions can be achieved inside the Crown. This can be held up as an example of concerned co-operation between two governing bodies. Abuse around tax exemption creates political tensions, which in turn mount the general population against Indians treaty rights. Given the fact that a majority of the abuse are those non-Indians abusing the ITE system, elimination of these non-Indian abusers will protect the First Nations integrity as well reduce risk of disputes and political tensions.

## Basic Requirements and Project Approach

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## Project Scope and Time Frames

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## Deliverables and Work Plan

The primary goal of this electronic ITE program is to reach maximum penetration of eligible retailers. On the government side, to minimize labour intensive and troublesome manual paper claims, and migrate using a moderate, accurate, secure, low risk, low liability and automated electronic claim system.

Wiz-Tec needs to achieve maximum penetration in order to generate sufficient revenue streams to sustain the ITE operation, at virtually zero cost to the government. Retailers benefit significantly from the amount of labour saved handling manual paper claims, and dealing with the associated rejections, administration, disputes and long delay's waiting for payment.

After successful deployment has reached a majority of retailers, achieving above 75% penetration, the government may further fine-tune its validation and rejection rules. The Government may go even further by mandating requirements for compliance, or otherwise pass some of the cost to non-compliant retailers who continue to use costly manual paper claims (charge a service fee to process manual claims). To reach this goal, we recommend the following deployment strategy.

For Quebec, French version of iPOS (for Retailers) and MSCClient (for the government) will be provided.

### Phase 1 (first 12 months):

1. **Maximum exposure, education and promotion of Wiz-Tec's new electronic ITE program.** Offering rebate programs and discounts for retailers who initially sign on. This includes informing and accepting 3rd party POS software for certification and compliance, for retailers who wish to have integrated POS for their tax exemption claims (similar way how Visa/MasterCard deploy their standalone PinPad).

It is in Wiz-Tec's interest and benefit to assist as many POS companies as possible in certifying and using the new ITE program, while at the same time ensuring full compatibility and compliance. The system is **not POS dependant, nor does it require a POS to run**, and can be configured to have the device co-exist with their POS device either standalone or semi-integrated without certification. In case of dispute or problems with their POS software or their quality of service, the government and retailer will have choices to allow them to disassociate their POS software, and run either standalone, or semi-integrated.

2. Relax the validation, SAF, over-limit and rejection (if there are any in place) rules during the initial deployment and penetration period for the first year, and before 60% of retailers are signed on. This will ensure minimum dispute and trouble free operation during the start up stage, where the primary objective and focus is to ensure all retailers are educated and comfortable with the new ITE program and its benefits.

### Phase 2 (2nd 12 month period and beyond):

3. **Control of manual entry** as the easiest form of abuse by adding a requirement for validation at the device. This can be achieved either by Pin Number (initially set as birth date, or phone number), or other validation rules such issue date, or expiry date, which can be validated yet not easily remembered without a card present. This validation should also be activated for SAF (store and forward) process, as well for over-limit purchases. This should be put in place after the first year of deployment.
4. **Control of over-limit and rejections.** Re-examination of the card-holder database for their historical purchase patterns, and setting individual over-limits based on maximum usage. Tie up rejection rules, which will do partial rejection only should a participant exceed 15% above their

maximum limit amount. The rest will be rejected, with the remaining amount of the purchase to be printed out for the individuals on a receipt they can file for a manual claim. Typically, the amount would not be significant enough for individuals to go through the trouble, nor is it likely at all for a possible abuser. This has the added benefit to the government of enjoying what the private sector refers to as breakage. If the user doesn't apply for rebate, then no rebate is paid. In the mean time, when the government turns on the rejection flag, it must allocate resources to handle possible inquires for limits, complaints, and manual claims. This should be planned for after 60% of the retailers are in compliance, and actively engaged into when 75% penetration is achieved for compliance.

5. **The beauty of the Merchant Server program is its centralized control**, including centrally controlled deployment of the firmware or software upgrades. Server sets of rules and policies can be re-configured, customized, and applied gradually while Merchant Server is running (like changing your tire while the car is actually in motion). The retailer side of the validation rules can be remotely upgraded through our firmware. Wiz-Tec maintains a development and certification server to help in testing the new policies or rules, or new deployment firmware, to ensure full testing of changes before deployment. This is can be a gradual process, after proper analysis of the transaction data being captured and thusly creates the opportunity to target for possible loopholes with tighter control.
6. **Other measures or controls.** Merchant Server provides all the details of every tax exemption claim, as a primary tool for additional control. Rules of eligibility purchase can be added, and the government can further mandate suppliers, who are not typically part of Indian business on reserve, to file their sales against retailer tax exemption purchases, to be cross referenced. This is one of the most effective means of validating and control of retailers for possible abuse. In order to achieve this, the retailers are required to enter all their tax exempt product purchases, and the suppliers are required to participate and enter all their tax exempt product supplied to eligible retailers. This can be further extended to PST auditing.
7. **Partial deployment.** Merchant Server is configured to support up to 8 categories of products for tax exemption claims. For province with policy restrictions, for example tobacco, the deployment can be first applied to fuel only, and further extended to tobacco without any deployment or minimal POS interference. In addition, Merchant Server is a "Visa/MasterCard" type of server which can be immediately deployed to other related applications, for example, fishery or farmer fuel exemptions. Given all the potential, these potential Merchant Server uses are not part of this deployment Paper, and shall be discussed and structured separately.
8. **Regulation and deployment for tobacco suppliers** to enter and report product distributed into Indian Reserves. Wiz-Tec will sell its iPOS devices and/or software to these suppliers and provide service and support on an annual fee basis
9. **Adapting and interfacing with the Federal Treaty card program.** Merchant Server is fully capable and ready to validate and process the Federal treaty card, side by side with a provincial Indian status card system. As a general rule provincial I.D. will be considered the root ID, and accurate for tax exemption unless otherwise specified. Prior to accepting the Federal Card I.D., the Merchant Server database must be populated with the correct information, thus the province has to sign a participating agreement with the Federal Government and grant Wiz-Tec access to the Federal Card database in order to retrieve and synchronize Merchant Server data accurately.
10. **Cross province tax exemptions.** When multiple provinces are participating onto the Merchant Server program, the provincial government may designate this feature to allow its own Merchant Server to seek out other provincial servers for I.D. verification. In this case, out of province I.D. will be validated externally by associated provincial Merchant Server systems, though exemption rules are enforced based on its own provincial Merchant Server.

11. **Evaluate** the possibility of mandating and enforcing electronic tax exemption claims for retailer compliance, once the majority participation objective is reached and sustained.
12. **For AITE and/or SITE migration** to the new ITE program, mandate new ITE compliance requirements and deadline, and 3rd party POS software certification. For those not compliant, on or before the deadline, new ITE devices will be shipped and installed to enforce for compliance.

## Departmental Responsibility

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## Special Considerations

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## Retailer Compliance

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**Cost to Retailers**

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**Risk and benefit to the government**

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**Risk and benefit to Retailers**

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**Risk and Benefits to Wiz-Tec**

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## Appendix A - Q & A (Fast Facts regarding the most commonly asked questions)

### 1. What options or alternatives does the Government have?

**Option 1:** The easiest alternative is do nothing and wait, which has been the common practice while settling some of the lawsuits and disputes. The problems will not go away, despite the “wait and see” attitude, and will continue to grow.

**Option 2:** Repeat AITE and SITE steps, by developing and deploying your own ITE program. Exact copying of AITE and SITE will produce the same result and issues to overcome. In our understanding, many of the provinces have already had years of discussions within their own IT departments. When everything has to be developed from scratch, there is no doubt there will be a great deal of trial and error. This holds true among the Server, Communication, and retailer devices, and a few dozen other critical components. Add to this the infrastructure and resources for maintenance and service support. The reality is that, developing the entire ITE program similar to what we propose is much more complicated than attempting to create the Federal Gun Registry.

**Option 3:** Issue an RFP to custom build by a 3rd party, which Wiz-Tec will bid on. The same as Option 2, but it is custom built externally to specification.

**Option 4:** Exact replication of NSIFTE, which Wiz-Tec will provide, since we are the only ones that can.

**Option 5:** Outsource to purchase an existing system, which Wiz-Tec will provide. (considering AITE and SITE are not viable for purchase)

**Option 6:** Actively participate in this proposed solution. Consider purchasing the solution after evaluation.

### 2. What is the operational infrastructure under the new ITE program?

- Merchant Server operations: the Government
- Merchant Server hosting, service, maintenance: Wiz-Tec
- Merchant Server physical and remote access: Wiz-Tec and the Government
- Individual Indian inquires and manual claims: the Government
- Retailer inquires regarding to rebate cheques or the new Program: the Government
- Retailer operational and technical support: Wiz-Tec
- Retailer device installation, service, maintenance: Wiz-Tec
- Government operational and technical support: Wiz-Tec
- Card production, issuing, replacement, distribution and maintenance: either or both, depends. If cards are replaced and distributed at retailer, would be Wiz-Tec or both. If cards are

distributed centrally (may via Band), would be the Government, though Wiz-Tec may under separate contract.

- POS software certification and technical support: Wiz-Tec
- Approval, rejection or disqualification (after certification): the Government

Note: for retailers using certified POS software, all related service and support will be the responsibility of the POS vendor. Wiz-Tec will provide technical support to POS vendor.

### **3. Why existing ITE programs are not truly treaty compliant?**

Government introduced ITE programs, including AITE and SITE, are quota or policy based "conditional" treaty compliant programs. There are no conditions within a treaty for statements like "400 liters of gas per month", or denial of filed claims deemed "unreasonable" beyond a quota or policy rules. Furthermore, because an ITE program generally doesn't have 100% participation, some of the First Nations members, and the Retailers, are denied for their treaty.

Some provinces are regulating and delivering tax free goods to retailers based on quota as a means of exemption, which would not be treaty compliant either, and automatically invites "black-market" distribution and abuse. There have been disputes, directly or indirectly, which can arise from a simple argument that it is the government's responsibility to delivery ITE.

### **4. The new program uses a form of quota too, so what's the difference?**

The quota is a mechanism of government control. The difference is that the new program uses individualized quota's, which are adjustable based on a per need basis, where the old program is based on "population" maximums.

Nova Scotia's NSIFTE for example, gives an average of 400 liters per month "unless otherwise needed" which reflects an accurate number for usage by the majority. AITE gives 1200+ liters per individual per [month](#), and they still have disputes.

For the small percentage of over-limit purchases that are occurring, the NSIFTE denies the portion that is overlimit to further reduce the amount, and the risk of dispute is minimal because of its insignificant amount. The dispute is effectively resolved with manual claims where presentation of the proven usage and a valid receipt and reason is given. The result is 46 manual claims, which represents about 0.01% of the total number of claims (over 500,000 transactions) or 40 man-hours of paper work to settle if we assume an hour per claim.

### **5. How does the new ITE program minimize and settle disputes?**

Putting aside of all the benefits, the new ITE program has been designed to deliver ITE exemptions to eligible Individuals, not the retailer, nor the Band itself. This essentially distributes the potential for dispute to individuals without retailer or Band involvement.

This means that the individual is now responsible for taking up a difference in opinion or a dispute over an amount with the Government themselves. As far as the Band is concerned, it is one individual, and there is a dispute mechanism in place to assist that individual. The retailer does not care, because they are not materially involved in the exemption, other than as the transmission start point for the process.

Under the old program, manual claims are part of the ITE operation (even for AITE and SITE), and disputes typically arise from retailers and/or Bands, only to be settled by lawyers. The new ITE program is different, retailers and the Band entity are removed from the equation when rebate is guaranteed once it is validated. Individual disputes are settled by adjusting their limit or rejecting unreasonable requests, or by requiring a manual process for a rejected amount. In other words, operation on purchase limit will handle the disputes, and manual claim is the endpoint to settle a dispute.

#### **6. The new program still engages in manual claims, so what's the difference?**

Under the new program, the produced receipt for manual claim is the designed mechanism to guarantee 100% ITE service to Indians. It records the proof of purchase and the reason for rejection for the individual in real-time, and is resolved by immediate justification by government operators.

This is significantly different than the old program, in that manual claims are filed without any proof or evidence to a retailer or the Band, and is judged by the government based on quota and policy. Lawyers in a negotiation process or in court must then resolve the dispute.

Under the new program, a manual claim is the mechanism to settle the dispute, but under the old program the manual claim is part of a routine operation.

From example shown in Q&A question #3 in Nova Scotia, under the new program the manual claims can be kept at a minimum depending on how tightly or loosely government's enforce rules. For governments who do not wish to manage manual claims, validation and rejection rules can be relaxed or manual claims can be automated. For government's which want tighter control against abuse, additional man-hours have to be allocated for the increased manual claims due to more rigid rejection rules.

Without successful penetration and compliance of the new ITE program, existing infrastructure for old manual claims has to be carried in parallel in order to guarantee ITE services delivered to Indians according to treaty. That is why it is critical to reach compliance level deployment, and why it is important for the government to provide maximized assistance for its deployment. Merchant Server, under this proposed deployment and migration structure, provides all the necessary components and implementations, though still relies on the Government's maximum assistance to achieve.

#### **7. How would Wiz-Tec provide service to retailers under the new program**

Wiz-Tec has to ensure trouble free and sustainable operations at the retail level, in order to receive the 2.5% accumulative revenue for its investment and to provide continuous operation. Participant retailers would be cooperative in order to deliver ITE to their Individual customers, and receive the ITE claim rebate. There is no such thing as "trouble free" without effective service and support at both ends.

- For generic hardware, Wiz-Tec will use local "depot" services. For non-generic hardware, Wiz-Tec will ship and do "drop-in" replacement.
- For operations, other than telephone lines, each iPOS device has remote control functions. Wiz-Tec can, via an existing secure connection, remote control troubleshoot the retail system.

- For connection related services, Wiz-Tec has to work with retailers over the phone and with their communication providers. Wiz-Tec may even assume control of the communications provider component to assure service.
- For communication availability related services, each iPOS device is configured to use backup connections and accounts as alternatives when communication fails.
- Telephone services will be 24/7/365. Prime service time will match retail business hours

**8. How would Wiz-Tec provide service to the government**

- Technical and training services for operations
- Development service for enhancement and automations
- Active maintaining mainstream Merchant Server and IPOS core

**9. Does the program come available in French for Quebec and bilingual service in other provinces?**

- iPOS is bilingual. French translation of iPOS will be provided and delivered to retailers
- For government operations, a French version of the MSClinet software can be used
- Wiz-Tec will partner with local service companies to deliver for various of offshore services including telephone and generic depot services to Retailers

**10. Card administration, participating the Federal Indian Status Card Program**

As is known, the Card I.D. is one of the principal control components for eligibility. The treaty is Federal, yet the provincial ITE program has to be run by the respective province in order to be honored. This creates further complexity when each province has to honor "out of province" Indians while claiming exemption within the province according to Treaty. In another words, according to a Treaty, each provincial government has to administer the entire Federal treaty database for card administration. For an average cost of \$15 to \$25 per card per annum to administer an effective I.D. system, provinces tend to try and cut corners, which in turn becomes the primary deficiency for abuse and fraud.

This is why it is important for all provinces to participate, as Merchant Server can be cross-country amongst all participating provinces.

Furthermore, Merchant Server supports the Federal Indian Status card, which means it can co-exist with provincial cards for easier migration. We encourage each province to participate the Federal Treaty Card program, not necessary at the initial stage, but rather as a future migration path. The federal government already runs its Indian Status program, although it is dysfunctional for ITE without the participation of provincial government. For the same reason, the Federal Treaty cards are neither widely distributed nor available to First Nations Members.

For provinces that already have (and almost all do) their own Indian Status Cards for tax exemption, we suggest in participating and helping to distribute the Federal Status Card, to make it a future standard and immediate migration path. The simple truth is that once the province begins to participate in the Federal Card Program, they have just relieved themselves of the management and expenditure. First Nations are a Federal responsibility, let the Fed's pay for the card.

Provinces may have issue with the Federal Status Card security and possible loss of control. Like a driver's license and passports, even with mag-stripe and picture-ID, none of the printed card could ever be secure enough.

The security is at Merchant Server using alternative real-time validations and Pin-Number, regardless of security features built into the card. The Canadian debit card, as an example, has minimum security, merely a mag-stripe track 2 encoded 16 digit account number, yet it is deemed to be the most secure in the industry, better than and Visa/MasterCard. All because it is simply a real-time server based Pin-Number.

In terms of control, it is at the Merchant Server as well, including its validation rules, exemption and rejection policies and so on. Merchant Server can host both provincial and federal cards at the same time, when it disagrees internally, the provincial one will be deemed accurate for exemptions not the federal.

In all scenario's, the Federal Government might very well control the card, but you the province control the validation rules.

In practice, because the Federal program is impaired without active participation by the provinces, this option should be implemented for future support, not direct reliance as part of the ITE program to be implemented and deployed.

## **11. Card administration 2, maintaining existing and distributing new card**

The previous Q&A for card administration discussed the path and its possibility for participating into a Federal Indian Status Card program, which is still our recommended path for the future. This section is only specific to maintain and upgrade existing card programs.

Considering the following common facts:

- Each province must create their ITE numbers, maintained and issued either by the Band or the government
- Regardless of how the card is issued and distributed (by government or Band), accurate card administration is required in order to achieve control
- None of the ITE cards other than Nova Scotia (driver's license) is adequate and has to be upgraded against abuse
- Using the driver's license would restrict tobacco purchases without a driver's license
- Card administration, distribution and migration could be too costly and troublesome

Under the new Merchant Server system:

- Merchant is fully equipped for card administration. For government does not have its own card administration facilities, Merchant Server's should be used solely. For government already has its card administration, it should be synchronized via automation, and ITE specific administration should be carried at Merchant Server.
- Because Merchant Server can host and cross-reference multiple type of cards, driver's licenses can be used for those with one, and original (or different/separate) cards can be used for those without.
- There are various methods of card distribution and migration methods can be utilized

For starters, existing cards, even if purely number based, even if issued and administered by the Band only, should be first populated into and used by Merchant Server during the initial stage, to achieve deployment and electronic claim. In case the government does not internally administer these cards (i.e. by Band or by participating Federal Status Card program), the government should either designate and provide Wiz-Tec access to the original. This allows Wiz-Tec to populate the card database for administration and electronic claims. Only when it is populated and fully maintained, and a majority of retailer compliance is reached, can the ITE program and control be obtained. Security and gradual control shall be left to phase 2, the “control phase”.

During the 2nd phase, the control phase, unless the Federal Status Card is already adapted, there are several ways to deal with card administration, upgrades and distribution.

**Method 1**, would be to use the Federal Status Card. This has to be coordinated at the Federal counter level, which may not be easy. For long term resolution, this should be entertained early on. If this method is viable, and ready during the control phase, Federal Status Cards should be distributed (via Bands, Federal or Provincial government).

Alternative to the Federal Status Card would be using the provincial driver’s license, which will cover around 2/3 of the individuals, and leave the remainder one of the following methods co-hosted in parallel.

**Method 2**, the cheapest route, designating each existing least secured card with a Pin number, by default to be the birth date, and gradually enforcing Pin Number validation on top of existing cards. This method may either be placed on an existing manual card based system, or be placed on top of any other card used

**Method 3**, issuing and distributing a new secure card centrally via provincial government or Band channels, accompanying an existing card system in use. Although this method is not a preferred method, it could be an alternative. From Merchant Server’s concern, it’s just another co-hosted card within, that the government has to additionally administer.

**Method 4**, issuing and distributing new cards via retailer using IPOS’s capability. Retailers are provided with a set of pre-programmed “blank cards” with defined security features compatible to IPOS and Merchant Server (Wiz-Tec will specify). Upon each occurrence of the “old” card used, it will prompt and issue the new Card if the individual accepts it (for liability reasons). Upon first use of the new card (typically when right after first issued), IPOS will submit and Merchant Server will capture, and disable the old card from the program. This is the easiest card distribution model, although it will create extra operational, training and service complexity for retailers and Wiz-Tec to handle. In effect, it passes most of the card administration cost (average \$15-\$25 per card per annum) to Retailer and Wiz-Tec, and is reducing to less than \$5 for a secure “blank-card” production and distribution. Of course, less security featured cards can be designated when utilizing Merchant Server’s Pin number in combination, to achieve desired security

Merchant Server can host 4 types of cards at the same time, in addition to additional validation and optional Pin numbers. All above methods can be combined, though the rule of thumb is the “keep it simple”.

Regardless of which method is used, the Government needs to recognize and take accountability for the task in order to gain effective control against abuse and fraud. Merchant Server and IPOS will adapt accordingly though card administration is not part of Merchant Server’s absolute requirement nor Wiz-Tec’s cost for this Paper. To reduce the complexity and startup cost, it should be introduced during or after the initial deployment, into Phase 2 as part of the control stage.

## 12. Alternatives for Card I.D. security, and card production

Security features for I.D. cards is one critical component that can not be ignored. It should support 2 level of security for both server level validation and device level validation.

As a reference to the Industry, Bank debit and current Visa/MasterCard are only considered sufficient for server level security (via Pin Number validation), and device level security is at minimum. Bank debit transactions can not be manually entered, does not address possible mag-stripe readability and communication issues, thus it does not guarantee 100% service. Current Visa/MasterCard is lack of server level security without any Pin Number validations. In US, they enforce AVS (Address Verification System) for manual entries only. Visa/MasterCard 2010 compliance specially addressed security at both levels, smartcard at device level and Pin Number at server level. In reality, Visa has already issued smartcard for the past 5 years but not activated, it would take another 5 to 10 years to reach 100% compliance.

The most secure server level validation is the use of Pin Number. Although there might be resistance for acceptance by individuals, it becomes an issue, which can impair the initial deployment process. Merchant Server is designed with this consideration, thus its Pin Number is "conditional" and "configurable", i.e. not necessarily requiring Pin Number (unlike the Bank debit) and may only be required when manual entry or over-limit is required. After the initial deployment reaches majority compliance, conditional Pin Numbers may be activated, using birth date or phone number by default. Pin Numbers may be changed by the individual at the IPOS device, over the phone or fully controlled at the server. This provides a way to gradually introduce Pin Number, over time to achieve Pin Number compliance.

Only relies on server level validation security (like the Bank debit) would not be sufficient without guaranteed connection and communication, specially when many of the ITE retailers are at remote locations where communication and timely service are at secondary grade.

Card level security is important for the ITE program to provide an "offline" device level validation without any dependency on retailers or cashiers, especially when server Pin Number validation compliance can not be enforced at beginning. For ITE it is in particular to address manual entry and SAF (offline, see SAF Q&A topic) situations.

Obviously, smartcard (on card CPU, sometimes called I.C. card or "Integrated Circuit" card) is deemed the most secure card for device level validation (which IPOS supports), though, the cost for implementation, production, and compliance are significantly high.

Mag-stripe or barcode themselves are not sufficient to achieve card level security. Without the high cost of smartcards, IPOS supports various device level securities based on special encoding methods that can be combined with existing mag-stripe and/or barcode. There are several alternatives to choose from, all based on the fundamental of AES based digital signature to achieve "offline" Pin Number validation. Wiz-Tec will provide the most suitable specification accordingly based on whichever production and distribution method used.

The card production with new security features should be centrally managed. Wiz-Tec will provide specifications and optional contractual services for this task. Regardless of the actual production, Wiz-Tec has to have some control in order to ensure the quality and compatibility with existing IPOS devices and Merchant Server on top of encoding specification, including number sequencing, digital signature generation, replacement numbers, etc.

Under the proposed new ITE program, card level security may be gradually introduced at the later stages, after initial deployment and compliance phase.

### **13. What is, SAF or "Store And Forward", and why?**

SAF is a common term used in the credit card industry. Considering communication and connection is the most problematic issue to assure 100% service success, SAF provides a means of "offline" validation and acceptance. It is engaged upon communication failure (which is unpredictable and often without customer or cashier's awareness), using a different set of validation rules at the device level to process the transaction. It then forwards the transaction (called "Force Post") to the server. The server also processes the SAF transaction under different and relaxed validation rules to capture the transaction. Under SAF, device level security becomes critical.

Visa and MasterCard have engaged in the common practice of requiring phone authorization for every offline transaction, unless it is for some high risk manual entry oriented businesses. IPOS can support this operation (which will add to the Government's operational complexity), where the phone obtained authorization code is actually a digital signature that IPOS can validate against the card number and retailer ID. In addition, as an alternative (without a server issued authorization code), IPOS can generate an offline digital signature to be validated by the server.

The best description we can give you is NSIFTE, which may be considered the only SAF ITE program, and is acceptable and effective when combined with sufficient Card I.D. security (driver's license, special encoding and digital signature transmission, etc.).

### **14. Card administration 3, central distribution of new or replacement cards**

Card distribution and replacement can be centrally managed, especially for provinces already who already have administrative infrastructure. Participating the Federal Indian Status Card program is an alternative for the future, when more provinces start to participate and promote it.

Without relying on the Federal Government, new cards may be centrally distributed either by the provincial governments directly, or by region by Band. Central distribution, which can add some operational complexity, may rely on the negotiation and cooperation of the Band. If or when this becomes an issue, alternative distribution models should be considered (see Q&A below).

### **15. Card administration 4, retailer distribution of new or replacement cards**

The fundamental of the ITE program is to deliver tax exemptions to eligible individuals. Band or retailers should not be part of the equation as long the Government can deliver the service effectively.

Without involvement of the Band or the politics surrounding the Band you can, by utilizing IPOS and Merchant Server designed implementation, provide for new or replacement cards. These cards may be issued, and activated, by the retailers. This applies to both brand new cards for provinces who do not have a card system, and replacement of existing unsecured cards.

Under this distribution model, pre-encoded "blank" cards are distributed to retailers. Each time an old card or manual number is entered, the IPOS device will prompt for a new card to be issued or replaced. Optionally, birth date (or phone number, or new Pin Number if used) will be promoted and submitted to Merchant Server. Merchant Sever will activate the new card (cross referenced), then deactivate the old. The customer then continues to use the new card to complete the transaction.

The disadvantage of this distribution model is that it adds operational complexity that retailers may resist. 50% to 100% of extra production cards would be required, and resources for continuous distribution and support to retailers would also be needed. This also adds to Wiz-Tec's support tasks to the retailers, and operational complexity if distribution is separated from Wiz-Tec.

Although, the biggest advantage of this distribution model is that it is practical and viable without Band involvement or the inherent politics.

As a reference, AITE issues barcodes using this distribution model to upgrade their "white card" for laser scanning. The retailers physically "attach" the pre-printed barcode sticker to the "white card".

#### **16. Card administration 5, without card production and distribution**

This option is only viable when existing cards has sufficient security features, and/or server based Pin Number can be enforced. This option totally relies on server level security. Device level security relies on the existing card itself, and additional validation methods with assured successful connection and communication.

Configured at Merchant Server, the IPOS device will prompt Pin Number and/or other validations like birth date. IPOS will validate based on existing cards along with the server side validations to complete ITE transactions. Initially, the Pin Number will be pre-configured to be the birth date as an example, and may be administered by both the Individuals (change Pin Number at IPOS) or the server (the Government assigned).

It may be gradually introduced, not activated during initial deployment stage (phase 1), then conditionally enforced during control stage (phase 2, for manual entry and overlimit), and gradually enforced after. Furthermore, it may be used in combination of physical card issuing and/or replacement.

#### **17. How to deal with existing policies and agreements already established**

For starters, the new ITE program may co-exist with any existing agreement, because Merchant Server delivers ITE based on treaty. The existing agreements may be re-negotiated to be more accurate according to a treaty.

The fundamental of ITE control is not about controlling the First Nations Members abusing and receiving ITE benefits, rather primarily for those non-Indians abusing and violating First Nations rights. It is argumentative but true that the government has the right and duty to control and eliminate non-Indians from benefiting from the program, thereby protecting the First Nations as the nominal provincial custodian of their rights. While at the same time keeping the public faith, and protecting the general public purse.

Under the new program, with sufficient but reasonable validation, there is no rejection of Indian Tax exemption, not to individuals and not to the retailer's, who are the intermediary, so Treaty rights are fully protected and honored. Merchant Server will deliver the "sufficient and reasonable" validations, at an individual level that is dynamic and adjustable.

The re-negotiation of an existing agreement could be a difficult and long process, which we suggest to engage in at the same time as we start to roll out the new program. The new program may also be part of the re-negotiation and settlement of old disputes, where it is likely First Nations Bands would demand some kind of benefits and assurance of compensation.

#### **18. Provincial Government control of a new ITE program**

The operation, and administration are carried by the Provincial Government. Wiz-Tec provides Merchant Server and various other services as an intermediary medium to deliver the service. Eligibility, validation, tax exemption and rejections are all set and administered by the government, which Wiz-Tec takes no part in other than to provide training, technical support and development services. A government's existing ITE program may co-exist as an alternative to the new program,

unless it is electronic already like AITE or SITE, in which case a phase out must occur as it is determined ours is more successful.

**19. How would programs like AITE and SITE participate the new ITE program?**

The new ITE program may co-exist with the existing AITE and SITE programs, although it suffers significant disadvantages as a result. A dual electronic exemption claim program co-existing at the same time is complicated and costly for a government to manage. Nor would it be cost effective to Wiz-Tec in such a small target market. Not that we do not entertain competition, but competing with a government ITE program that is funded by public tax money at little or no cost to retailers, versus private enterprise charging retailers to fund their own ITE program, is simply not viable.

We will entertain opportunities for others if the provincial government would gradually abandon and upgrade existing programs onto the new ITE program within a 2 year period of time. Wiz-Tec will consume the remaining retailers not onto AITE and SITE systems, and migrate those known problem sites that are on AITE or SITE during the first year. Based on the results of the program in the first year by the government's assessment of whether it was successful or not and mandate full compliance for the new program within the next 12 months.

Retailers may continue their original POS operations and use the new dedicated device for tax exemptions; or work with their POS software vendors to certify and upgrade to the new program. POS vendors may continue market their certified POS to all retailers, in the mean time, the government effectively removes POS dependency with the new dedicated device or POS drivers. If or when POS or other software oriented problems affect ITE operations, the retailer can boot or run from provided IPOS CD and continue independent ITE operation without POS. For the protection and comfort of existing POS vendors, upon government request, Wiz-Tec may further sign away the POS market for competition.

From a technical aspect, integration and migration from existing AITE and SITE are very simple. Merchant Server is designed to adapt to external hosts, and because AITE and SITE employ a database "replication" model, Merchant Server will simply be the "replicatee" during the integration, the "replicator" during the migration, and then the true server after the migration. This does not require any governmental IT resources to achieve painless migration.

**20. How much resource is needed to operate the new ITE program?**

This depends on how rigid the new validation and rejection rules are. Most of the system processes are automated. At a minimum, passively, one part-time trained staff, reallocated from existing ITE resources, would be required to handle routine administration of Indians and retailers. As an alternative, the task may be blended into existing tax administration and auditing operations. Should dispute arise from an Indian, it should be entertained and settled immediately in terms of honoring their manual claims and/or adjusting their rejection limits. I.e. the operator and manual claim should be the endpoint if any dispute occurs.

The minimum requirement of a full time person is not entirely for Merchant Server operations, but rather to provide availability during business hours to provide service to individual inquiries. If more aggressive rejection or control rules are applied, the government has to allocate more resources to entertain individual inquires, though not the operation of Merchant Server itself, which for the most part is automated and hands-free.

Wiz-Tec will allocate sufficient technical staff for active Merchant Server maintenance as well technical service and support to the retailers and the government as part of its day to day operations.

## **21. Can this program be extended to other government services**

It is not within the scope of this Paper, but yes, definitely. Merchant Server is designed and implemented using a Visa/MasterCard like server based thin-client model. It can be deployed into other types of claim based services like the Fishery and Farmer tax exemptions, PST collection and exemption and so on, to the extent of full medical or social services claim services.

In terms of conditions for ITE enhancements, most of the modifications are at the server at a single point. For services requiring a retailer function, which needs to be altered or added, the iPOS (and its drivers provided for 3rd party POS) can be modified and electronically delivered to each retailer, all from the central server automatically.

In case modification is required at device level, likewise of the latest Visa/MasterCard that requires new Pin Number and smart card beyond 2010. In case of ITE, this would be likely when a different card media is required for better security. First of all, the deployed iPOS devices already support various form of card currently in use, thus change would be limited to functional modification of iPOS to be downloaded, accompanied with possible replacement or plugging new devices. Further, Merchant Server already has alternative validations and Pin Number build-in that can be configured and activated, with more sophisticated encryption and transmission security above current banking standard. The Pin Number has been deemed most secure and long term sustainable, and under Merchant Server Pinner60 technology, is never transmitted over the wire so is not subject to security risk according.

In case that replacement devices or modification is required at retailer, it is kept at minimum cost for the device and re-training the retailers for the new.

## **22. Why should the government actively promoting and providing financial assistant to the new Program.**

The government actually is the biggest beneficiary of this program, in terms of cost efficiency, eliminating fraud and abuse, gaining effective control, reducing risks and liability and so on. Gaining maximum compliance is a key component not only for the success and benefit of the new Program, it also give the government leverage to enforce new policies and to settle existing disputes. Once majority compliance is reached, the government may further mandate and eliminate old manual and/or problematic ITE process all together.

Government engaged financial and technical assistance would reduce barriers to acceptance significantly. Over time successful operation will further assure their trust of the new program. Wiz-Tec will aggressively market and provide minimum or zero start up cost to gain participation. The government may offer, in parallel, funding for optional components related to retail operations but not dependent upon them:

- Communication installations, upgrades, routers, modems
- Electronic Pump control upgrades, Laser scanner upgrades
- POS upgrades. Rebate for 3rd party POS integration

These programs should be part of the Indian technical aid program, that might be part of the settlement of disputes, and true to its nature assist and enhance Indian businesses.

### **23. What's the catch?**

There is no catch to the government. There is no cost or risk for the government, and no requirements, even for cost justification.

The only "catch" to the retailers is the same as Visa/MasterCard, that is the 2.5% gross transaction fee. This is the only means of revenue to sustain the entire ITE program, where all the others are either at a loss or cost basis to help secure the transactional revenue source. The 2.5% charge by Visa/MasterCard is generally accepted by almost all retailers, so it will not be a major problem when other benefits are considered and combined.

Duplicating the same success in Nova Scotia, the technical aspects of the risk are deemed minimal. Most of the risk to Wiz-Tec relies on the new ITE program's acceptance to mitigate. A partially deployed problematic or high maintenance ITE program may be deemed successful to a government, like AITE and SITE, but would not be satisfactory to Wiz-Tec. A few dozen lawsuits under existing ITE program may be normal to the government, but any lawsuit among any parties would deem unacceptable.

### **24. Should government issue an RFP**

Normally, Government RFP's are for cost and risk justifications, neither of which is applicable to this Paper, unless the RFP specifically demands cost-free and risk-free functional specifications for the entire ITE program that is funded by Indians and Retailers.

Secondly, RFP's are typically for custom developed solutions required by the Government. Since it was first developed in 1997, and matured inside the NSIFTE, Merchant Server should be considered a product for the government to outsource, not a custom solution to develop from scratch.

A RFP is typically beneficial for the government to invite competition for the best alternatives. Instead of rebuilding and testing from scratch based on specification, it is only logical to purchase a known pre-built product or solution. In this case it is logical to choose Merchant Server, instead of other alternatives like AITE and SITE, neither of which are for tender, not adaptable, have flawed designs, problematic implementations, and questionable results.

In case of the NSIFTE, AITE was initially considered internally and then abandoned. The RFP was issued based on the "best understood" requirements, Merchant Server had to be disassembled and customized to exactly meet the RFP, which restricted many features and benefits of Merchant Server as a whole. It only takes Wiz-Tec 4 weeks to customize, and 2 weeks to deploy. The NSIFTE was in full operation within 6 weeks. Using less than 50% of the complete Merchant Server system, customized exactly to the RFP, NSIFTE still ends up being the "best of breed" producing outstanding results. Merchant Server for NSIFTE was purchased, retained, and separately maintained from the main stream Merchant Server developments.

In case the Government wishes to issue RFP specifically against Merchant Server, it should be kept generic "outsourced" for ITE products or existing solutions, without any specific technical or implementation details. Wiz-Tec's RFP response will contain the entire Merchant Server as a whole without having to be dismantled to the specifics. Otherwise, if any specifics are imposed in the RFP, they will be considered "custom" and subject to cost. In order to minimize cost, responsibility and liability, Wiz-Tec has no choice but to disassemble Merchant Server to the "minimal" pieces and only build based RFP. Merchant Server is extremely complex like Visa/MasterCard and Bank debit systems, has dozens if not hundreds of critical components and implementation details that could not be easily nor completely specified. Functions not specified would likely be missing, and different or incompatible components and implementations would likely be customized at cost basis.

Regardless, Wiz-Tec will entertain any RFP that a Government may compile, even if it means dismantling of the Merchant Server so it can be customized for the RFP like the NSIFTE. We are confident of the outcome when competing with a complete and proven product against “custom build to suite” solutions.

**25. Should the government establish a contractual agreement with Wiz-Tec**

If there is a contractual agreement, it has to be fair and equal for both parties as a general rule. This proposed solution bears no cost or risk to the government while receiving the most benefit, and it is funded and sustained by the retailers. Therefore the agreement should be more of acceptance, assurance, assistance, cooperation and compliance to regulation as promoted to the retailer by the government.

If Wiz-Tec receives an acceptable level of comfort reflecting the government's commitment to participation and acceptance, Wiz-Tec will assure in a contract the terms of this Paper. This Paper gives the government 24 months, starting from the first day of acceptance, to purchase the ITE system. Contractual agreement may be drawn up, should the government wish to exercise this option after evaluation of the program before it expires.

**26. Should the government establish a contractual agreement with the Retailers**

No formal contract is required between the government and the retailers in principle. Instead, the requirement should be limited to compliance and to faithfully operate the exemption devices as the only means of tax exemption, versus' any old ITE methodology.

For governments requiring purchase entries through the system, this may be enforced either with an ITE contract, or with conditional rejections without compliance (similar to credit card “charge-back” terms). The Government may mandate retailer compliance requirements at any time before, during, or after the new ITE program is deployed.

**27. Should the government establish a contractual agreement with the Band**

Agreements with Bands are typically what has been associated with old agreements, disputes and lawsuits, which is not what the Paper is for.

The government may choose to commit to this Paper as a form of settlement to existing agreements and disputes, or engaging the new ITE program in parallel to existing agreements and disputes, be they settled or pending.

**28. Can the Merchant Server be hosted in a Government data center**

Merchant Server is hosted at Wiz-Tec's designated secure and reputable data center (Q9 or Telus). Physical hardware for the server is typically leased. Connections and backup services are purchased from the hosting company. It gives Wiz-Tec the full access required for service, maintenance and possible upgrade. Hosting Merchant Server at government designated facility can be entertained provided that, Wiz-Tec continue to gain its ownership, rights and full accessibility. Furthermore, costing of the hosting shall be born by the government to compensate for distance travels and inconveniences in order to install, actively maintain and service these servers remotely.

**29. Can the government purchase parts of Merchant Server components.**

Within the initial 24 month terms, the government may purchase the entire running Merchant Server system (software is licensed not purchased), including contractual obligations to hosting data centers, retailers and 3rd party service providers starting from the date of purchase. Continuous service, support and operation of Merchant Server has to be negotiated based on

monthly or annual basis, including all devices and services to the retailers. The purchase option expires after the initial 24 month period, and the cost would then be based on 3rd party assessment, with the value at no less than the pre-established amount which is considered Wiz-Tec's start-up cost and investment.

The government may not wish to exercise this option, especially around the political topic of charging Retailers or Indians by the government to run their ITE program, and the burden of maintenance and service including retailers and distributed systems. In this case, the government might purchase only the physical server of the Merchant Server components including the Hosting and the Merchant Server licenses, for the same amount. While leaving the operational, service and retailer components to Wiz-Tec. This would include the service, maintenance, operations, support, iPOS devices, retailer contracts, revenue, collections and receivables.

Under these terms, Wiz-Tec will operate the program based on revenue received from transactional charges and provide free service and support to maintain and enhance the government's ITE program. This option will be given to the Government before, during and after the initial 24-month period. Enhancements and modifications specifically required by the government, when deemed to be reasonable and compatible with Merchant Server mainstream, would be provided free.

Purchasing gives the Government the benefit of control, though continuous development and enhancement will also be restricted and stopped for the "retained" version of Merchant Server. Without any control, this limits Wiz-Tec's ability to continuously and globally enhance and advance the Merchant Server to inter-provincial and Federal level needs. Any further customization or modification would be at cost, on a specified requirement basis, and likely would be incompatible nor interchangeable with Wiz-Tec's continuously maintained Merchant Server system.

Regardless of Merchant Server's potential amongst many other industries, the immediate application after achieving nation penetration is automated electronic tax collection, which Merchant Server is already capable of. Under the same deployment model, further cost and size reduction of the iPOS device (because its only needed for product validation, not I.D.) would make future electronic tax collection a reality.

### **30. Why embedded, instead of using a widely available PC or Web based deployment model**

IPOS can be deployed onto Windows platforms. Although, the Industry makes them dedicated. This removes the dependency on Windows, which changes every 3 years according to Microsoft business practice. Furthermore, 95% of Windows components are not needed at all, and it is high maintenance, causing most of the systematic problems including tens of thousands of worms and virus'. Making it dedicated without POS dependency, 90% of the problems, operational complexities and service issues associated would also be eliminated.

When hosting IPOS under Windows, which is an option available usually within a 3rd party POS machine, the instability issue has to be part of their POS service maintenance. Even under this scenario, where retailers Windows or POS is corrupted, the retailer simply reboots the machine with the IPOS CD, and their ITE service continues without Windows or POS. This successfully removes the operational dependency even if it is certified POS software used.

When IPOS is deployed as an embedded solution, without the unnecessary OS components and the unrelated POS functions, IPOS is far more reliable. IPOS is booted from a "read-only" media like CD or physical drive partition, thus it is not subject to a virus like attack. Even if, in theory, IPOS is attacked somehow, a simple reboot will remove all the corruption and resume full operation.

Web based claim processes are not suitable for ITE because it is based on manual entry without sufficient device level control. Omitting validation of eligible Card I.D. and qualifying products defeats the purpose of security and control against abuse and fraud. Hosted on Windows like

systems, which are "fat" client based, the web browser is also once again a major source of virus attack.

IPOS does have embedded a web browser that is optional. IPOS also has an embedded email component connected to Merchant Server to retrieve messages published by either the government or Wiz-Tec.

Whether a government realizes it or not, the "dispensable" retailer device is one of the most difficult components to build. Visa/MasterCard have not developed their own PinPad. Only a few banks such as the Bank of Montreal initially did, only to end up abandoning it. Currently, all 3<sup>rd</sup> party PinPads are due for replacement because of the new Visa/MasterCard 2010 compliance, nor would any of them be suitable for ITE because of extra hardware and functional requirements.

For the past 7 years, Wiz-Tec has developed 5 different types of PinPad like devices on various embedded platforms including engineering our own. AITE and SITE are made to be POS dependent because they have no choice, nor could they develop one. Between the two retailer devices available for Merchant Server, IPOS is the only one best suited for ITE.

### **31. Why embedded PC, and not an embedded PinPad**

Wiz-Tec has developed various PinPads, and has demonstrated this for the past several years. The capability of a PinPad is very limited in meeting all the requirements of ITE systems, like laser scanning, pump control, key entry, SSL, AES, VPN and so on. The cost of a high-powered PinPad is actually twice as much. Although the cost of a PinPad may be comparable to an embedded PC, the auxiliary devices, like a scanner and printer, are usually significant add-ons. Furthermore, the new Visa/MasterCard 2010 compliance and uncertainty of the Bank DES encryption upgrade makes the entire PinPad industry unsustainable during this changeover.

Wiz-Tec proposes the embedded PC solution, instead of embedded PinPad (which is available if a government chooses), to remove the dependency in order to achieve long term ITE sustainability. This solution is generally referring to as a "PC-Appliance", and is used in high complexity bank ATM machines to general consumer products like a game console (Microsoft X-Box 360 and Sony Play Station3).

The difference between an embedded PC and a standard PC is not only the size of reduced physical devices, but also the significantly reduced "soft" component, i.e. OS (Operating System). IPOS comes with a mini-sized embedded OS which is only about 3% the size of Windows with all the desired features and functions required. When it is "embedded", it becomes dedicated and tightly integrated for its job without any operation or maintenance complexity. Furthermore, the embedded PC hardware is 100% PC compatible, which can then be expanded and adapted according to the mainstream PC market. For IPOS, the physical hardware between an embedded PC and standard PC is interchangeable without any dependency to each other.

### **32. How will the successful communication be assured**

Simply put, communication is the number one cause of problems. Under the new ITE program, it is client initiated communication and the retailer will be responsible and have first hand knowledge of and how to act upon seeing a failure. Wiz-Tec and the various telecommunication company's service and support quality does impact on the outcome.

Internally, IPOS uses dual connection alternatives. For each connection, when timeout or error is detected, IPOS will make secondary attempt after a forced reset of its communication drivers. When one connection becomes unavailable, IPOS automatically uses the secondary.

At the Merchant Server end, 2 core processors are hosted, and simultaneously available for IPOS to "route". Each server code has its own proxy and load-balancer to dispatch among available

servers. Inside its "Management Server", is a server monitoring service that "pings" Merchant Server periodically, and automatically calls (pager or cell) a service technician when the Server or communication becomes unavailable.

Furthermore, IPOS employs the SAF (Store And Forward) that Visa/MasterCard uses. When all means of communication is unavailable, IPOS will engage SAF mode using a different set of validation rules locally, then store the transaction. Upon resumption of communication, IPOS will forward the stored transaction under "Force-Post", where Merchant Server uses a separate sets of validation rules to validate and capture the transactions. SAF enables 100% retailer end operation, though because of relaxed offline validation being relied on, the server must accommodate and accept claims under this special condition. SAF is one of the critical components for ITE where most retailers are at very remote locations, and communication could be troublesome. On the other hand, because communication problems are random, and SAF is automatic without obvious awareness by the operator and customer during the transaction, the risk of targeted abuse is at a minimum.

At the Wiz-Tec end, in order to assure capturing of transaction fees, service for communication has to be dealt with immediately and continuously.

The result of Wiz-Tec's product reliability and quality service has been proven and shown in NSIFTE. Above 98.5% communication success, the remaining 1.5% are typically caused by network, power, line or operational (like fax sharing) interruptions, that are automatically recovered without human intervention.

### **33. Why alternative validation should be considered**

Visa/MasterCard charges upwards of 15% transaction fees on any type of telephone, mail-order and internet businesses, on top of minimum withholding funds and other business requirements.

*The US government reports 16% fraudulent usage from the Hurricane Katrina aid program yielding a cost of \$US1.7 billion dollars. The reason is very simple, manual entry of a card number without device level validation.*

Outside these high risk business practices, manual card numbers are also one of the most common and easiest forms of credit card fraud. The fraud becomes very viable because all retailers accept manual entry, and many "do not care as long it is paid for". For the same reason, bank debit systems do not allow any form manual entry at all, and Visa/MasterCard 2010 compliance standard will completely remove retailer dependency.

All provinces other than Nova Scotia use less than adequate I.D. and heavily rely on manual entry for their ITE claims. This simply means anyone can write down a card number and can get tax exemption. Retailers will not care, they will benefit, and they cannot truly be held responsible for policing the I.D. The actual amount of abuse is disputable and remains unknown, though the existence and risk is undeniable.

Optional validation becomes a very important mechanism for this battle. In Nova Scotia, any manual entry is promoted with entry of "issue-date" that is only printed on physical card.

Under the new ITE program, Merchant Server may optionally place additional validation criteria to maximize its validation security. The default conditions for additional validation are, manual entry, over limit, and SAF; and validation criteria could be issue-date and expiry-date (device based), or birth date and phone number (server validated).

The optional validations may be configured at run time, and disabled during the initial deployment phase, and selectively or fully activated afterwards. This further extends to Merchant Server's

configurable Pin Number security which is much more secure and flexible than the one banking industry employs. The end result is effective and individualized governmental control.

Migration to utilize optional validations is very flexible too. The government may designate and continue to use the existing "white-card" or manual entry only methods at start, and during the migration process. Either by retailers, by region or by individuals, these validations can be enabled gradually on top of existing methods already used. The government may further issue more secure cards, e.g. Federal Status Cards, in parallel to any existing card management, which Merchant Server will co-process. Once integrated and accepted into retailer options, the validation rules may be further tightened, including migration to full Pin Number based validation. All server-based validations can be done live, centrally at the Merchant Server without the retailer's awareness. Device based validation will be via IPOS which can be electronically deployed.

#### **34. How could Merchant Server's Pin Number be better and more secure than the bank's**

Pin Number, as well as passwords, have been deemed to be the "autograph signature" equivalent for I.D. authority. Consumers are well educated in protecting their private banking identity.

The bank debit system uses the aging 56 bit DES encryption on its PIN number entry, transmitted over the wire and validated at the server. Private key for the encryption is stored inside and protected by the PinPad, and the rarely changed public key is transmitted over the wire natively. Other than the PIN number, information is not encrypted, and transmitting data integrity is validated via DES based "Macing".

56 bit DES encryption is deemed the least secure, it has proven that it can be easily broken in under 2 minutes. The public key transmitted can be intercepted, and the transaction can be altered by "re-Macing". Even much higher encryption methods have been broken as seen in the satellite TV industry. It is safe to state that, over time, any encryption could be broken. Once broken, the individual consumer is left at risk, and without proven evidence, leaves the bank out of reach for liabilities. The banking industry is fully aware of this, and is due to upgrade its encryption to more secure 128/256 bit AES based platform, but is having difficulties due to its dependency on ,and cost, for the PinPad deployment.

Merchant Server uses 256 bit AES based encryption and "Macing" as a standard. Transmission is further encrypted via SSL, VPN or AES. The Public key is issued and may only be used within during of the connection. Most of all, for validation, the Pin number is never transmitted so it is not subject to interception or attack.

It may not be deemed necessary, and may be considered "over-kill" for current ITE applications, but considering long term sustainability and control over 10 to 20 years, this becomes one of the critical components.

Furthermore, unlike bank debit which always requires Pin numbers, Merchant Server's Pin Number is dynamic and can be conditionally turned on or off at the individual level. This gives the Merchant Server application a choice and a migration path for control and security.

For this ITE program, we propose to relax the alternative validation and Pin Numbe at the start, which may complicate and impair the penetration compliance process. During phase 2, the control phase, either alternative validation or selectable Pin numbers may be introduced. The Pin number may be as simple as the "birth-date" for default, activated centrally at the server, and selective only for those manual entries and over limits. Over time, the full Pin number requirement can be enforced to maximize government control if deemed necessary.

### **35. How do you compare between AITE, SITE and NSIFTE**

We have identified many serious problems with AITE and SITE, the vast majority of which do not exist under NSIFTE.

Between AITE and SITE, although based on the same design, SITE is generally worse in many areas other than using PCAnywhere instead of out dated Blast. Both Governments have discounted or otherwise discussed various issues we identified, and both claim partial achievements in relation to their initial objective which is easier electronic exemption claims.

NSIFTE was specified based on the AITE after recognizing problems inherent in the AITE. Card I.D. security (driver's license), manual entry control, reliable communication, individualized quota, partial overlimit rejection are just a few items which were compensated for.

In order to achieve 100% compliance, a single POS vendor (Wiz-Tec) was chosen, and the Government is actively engaged into marketing to retailers. Wiz-Tec provides service maintenance for both retailer's POS and Merchant Server. The Government is responsible for routine operational tasks as part of their tax administration. Retailer rebate cheques are generated weekly and its fully automated, with no disagreements or rejections. No disputes or lawsuits from the retailer or the Band, and disputes from individuals are settled over the phone by adjusting their limit only when it is deemed reasonable to, or as a result of a manual process rejection receipt being mailed in. Actual mailing of rejection receipts for manual claim is actually insignificant amongst all rejections reported by Merchant Server.

Communication, deemed the most troublesome component, is handled by Wiz-Tec's ADR Server at both ends, automatically reporting, retrying and recovering. Retailer hardware and service were initially given to a much larger POS service company, later due serious service quality issues, reassigned to Wiz-Tec.

The biggest disadvantage of the NSIFTE is its POS dependency (Ironically Wiz-Tec's own POS). Strategically, the POS system is introduced and promoted as a dedicated "tax machine" provided free by the government. For those who do not want POS, it will remain to be the "tax machine". For those who do not have POS or electronic pump controllers, they are significantly beneficial as a technology aid offered by the government.

When one compares the NSIFTE in relation to the other two programs, 99% of the AITE and SITE problems are eliminated, to produce the "better than expected" results.

### **36. What's the difference between NSIFTE and the new Merchant Server system**

The NSIFTE program is the outcome of a RFP, which the Nova Scotia government issued. The initial RFP specification was based on collective information from AITE. Merchant Server is adapted to the RFP, thus many components are removed for simplicity and reduced risk of liability. Following Wiz-Tec's recommendation, many of the RFP specifications are upgraded including manual entry validation, communication, fault tolerance and so on. For cost reasons, the failsafe backup server has also been removed, in turn relying on Wiz-Tec's quality product and service to achieve 100%, which we did. This produced results that were well above the initial objectives the government wished for.

NSIFTE is batch based, not real-time, semi-replicated not central, POS dependent (Wiz-Tec's POS), not dedicated or embedded. The ADR server is custom developed to achieve a 98.5% required success ratio, plus automatic hands free recovery. One may consider NSIFTE is "SAFE" being comprised of only the Merchant Server, with 60% of its components missing or removed. It was purchased, hosted and operated by the government, and maintained and serviced by Wiz-

Tec. The government pays for the full cost for the POS, give it away to participating retailers, which in turn results in 100% penetration and compliance.

The details of the NSIFTE are private so Wiz-Tec is restricted as to how much it can present. The success has been profoundly claimed by the government. Wiz-Tec's quality and responsive service at both the government and retailer end has assured the entire ITE program to be trouble free.

The proposed new Merchant Server is significantly better by several magnitudes. For starters, it is not government specified and restricted by RFP, rather, replicated based on the Visa/MasterCard model. It is complete in its design, neither reduced nor customized according to RFP. More than half of the features presented in this Paper do not exist in NSIFTE.

The government may consider a Merchant Server program in a scenario specified via RFP, like the NSIFTE, and Wiz-Tec will definitely entertain. Due the requirement of budgets and such, there will be the risk and possibility of losing some critical components in order to meet the RFP specification. For this reason, Wiz-Tec initiated this Paper for a government to out-source a complete and proven product or solution, rather than develop or customize by RFP.

If the Government wishes to replicate their ITE program exactly like NSIFTE, for the benefit of assured outcome and success, Wiz-Tec will certainly entertain and deliver.

### **37. How could Merchant Server be "fixed or modified while flying in the air"**

Unlike AITE and SITE which were designed statically based on 1998 industry conditions, Merchant Server and IPOS are designed to be long term, reflecting and adapting to the fast paced, dynamic industry changes. In addition to maintenance, enhancements and bug fixes, this further applies to possible adaptations and controls the government may have in the future, and various migration requirements different governments are facing.

Not to discount AITE and SITE, both of which have been fixed and modified for various reasons over the past few years, but they are both batch-based and only "fly" at night during the synchronization while during the daytime they "land" on the ground for maintenance. In addition, modifying one single point at the server is easy, AITE and SITE are impaired and unsustainable because of all the auxiliary dependencies, and may even be impossible to change on the communication component that resides within the server.

Merchant Server is real-time, operating 24/7, and almost all its critical components can be "hot-wire" replaced without any interruption of service.

The following are only explained for the obvious:

- At the server end, Merchant Server is hosted onto 2 physical servers, one of which is for failsafe backup. Each server has no less than 2 processing cores running and managed by ADR server's proxy and load-balancer. The Test and certification server is hosted separately, for modifications and enhancements. Once a change is fully tested, it is then replaced one by one, during live server processors.

During operation, most of the configurations can be changed at run time. In case of systematic changes, the processor can be shutdown and reloaded while the other processor continues to service.

- At the retailer end, IPOS is installed onto a "read-only" partition, and is not required once it's loaded. This can be modified after being downloaded electronically from Merchant Server while running, and reloaded once rebooted. IPOS distributed on CD has to be shipped

separately, and IPOS drivers used by 3rd party POS companies have to be provided by the representative POS providers.

- Specific configuration changes at the retailer end will be via either phone or remote control access.

In reality, to minimize cost and complexity, unless having serious bugs or problems, changes to IPOS firmware or device should be kept at minimum, i.e. no more than once a year for software and no more than 5 to 10 years for hardware. Whenever possible, changes should be kept at the server centrally, with sufficient planning and mechanisms for testing, piloting, training, rollout, monitoring, service and failsafe rollback.

**38. How effective will the new ITE program be against abuse and fraud? How much total tax rebate reduction should the government expect?**

The new Merchant Server system offers many cost benefits to the Government. These questions are among the most common questions the government would ask, in order for cost justification in addition to streamlining manual process and reduction of liability from legal cost and disputes.

First of all, it is extremely difficult to estimate the true percentage of abuse and fraud. One might as well ask, "what's the percentage speeders caught speeding when 40% of the police force is allocated for traffic control vs only 20% allocation of resource?" There are many forms of abuse and fraud, each extremely difficult to catch and prove without sufficient evidence. All very costly to resolve. One thing in they all have in common though, they are all human motivated, which is exactly what every ITE program is facing.

Regardless of whether it is by non-status Indians, or by the Indians themselves, or by cashiers or retailers, the fundamental truth of the new ITE program is to take those very human factors out of the validation process, and replace them with very reliable, dedicated machines.

If we cross-reference to the existing Visa/MasterCard business, even under close control, the risk of manual entry oriented credit card business is up to 15%, even if all transactions are electronically validated in real-time. The existing ITE programs, with the exception of the NSIFTE, have no card level security. This means the programs have no effective means of real-time validation (if any electronic capability at all), and they largely rely on manual entry. When you base the empirical experience against this, you cannot expect any less risk against abuse and fraud.

The reason Visa/MasterCard charges 2.5% to compliant retailers is only because they can effectively minimize the abuse and fraud to be below 5%, while still making significant profits after the entire infrastructure and deployment cost are factored in.

5 years ago, the standard rate was at 3.5%, and 10 years ago it was at 5%. Effective control against manual entry, plus upgrading card and PinPad security features gave credit card companies the strongest muscles to minimize risk from abuse and fraud. The effective security also allows insurance companies to justify and profit from delivering various protection insurance services to both credit card companies and individuals.

Secondly, Wiz-Tec could not and would not make any claims of percentage or numbers, other than giving the facts and what we know are industry practices against abuse and fraud. Regardless of how much the abuse and fraud actually is, it should not be part of any dispute for cost justification when the proposed solution is at no cost or risk to the Government. Furthermore, replication of the same technology and implementation Visa/MasterCard deploys, the control, the effectiveness and derived result of the Merchant Server system may be fairly justified. The outcome of the new ITE program also relies on the Government's ability and effectiveness to comply, penetrate, obtain and enforce the control. Merchant Server has many specific features that allows the Government to

achieve similar or better control than current Visa/MasterCard standards, while allowing you to support any existing infrastructure for compatibility migration.

Even without any consideration of cost justification for abuse, fraud and any other legal or liability measures, the responsibility to deliver a cost effective and sustainable treaty compliant service to all eligible Indians can not be discounted.

### **39. Why 2.5%? Why and how can Wiz-Tec's could sustain the entire ITE program long term?**

With dedicated validating PinPads, relatively secure cards, processed in real-time, Visa/MasterCard transactional fee's have ranged from 5% 10 years ago, to 3.5% 5 years ago, and now their standard is 2.5%. This is known and accepted by established retail businesses, who are fully compliant. Bank debit fees range from \$2.50 (some private ATM), to \$1.50 (cross banking ATM), to an effective average of \$0.45 per transaction. There are various transaction based charges, from \$1.89 medical claim fees, to \$0.10 per minute long distance charges, and upward of 15% energy delivery fees. Transaction based fees provide an effective and sustainable means to provide and maintain quality services. The benefit for the consumers is the convenience and assured continuous services. The cost of administration and maintenance of a similar loyalty program ranges from tens to hundred of millions of dollars per annum. Airmiles, without any actual deployed devices, is a \$210 million per year business, as an example.

Visa/MasterCard charges are widely accepted in the retail industry, above 95% in Canada. The 2.5% is charged to retailers, which in this proposed Merchant Solution is referenced and promoted to retailers, while maintaining a reasonable and competitive fee structure in relation to Visa/MasterCard charges. A Band debit model applies transactional fee's to individuals on top of banking business revenues, which is not suitable for ITE applications. The 2.5% transaction fee is based on gross amount, and will remain competitive, and among all other alternatives, it is chosen to closely resemble the Visa/MasterCard business model, which the entire Merchant Server system is replicated upon. Any lower rate would not be practical nor beneficial to sustain the business, nor would it make it any easier to market to retailers. Any higher rate, even if it is deemed reasonable and cost justifiable, would be beyond the retailer's understanding, and would make retailer acceptance more difficult.

In consideration of the end-user of the Merchant Server Program, the fee is the lowest rate amongst all the transaction fee based industries. The difficulty for Wiz-Tec is the target ITE business is significantly smaller, no more than a fraction of the credit and debit card industry, while the cost of devices, complexity, security, service and maintenance are much higher. With far less development and maintenance resources, both Merchant Server and IPOS have to be durable, reliable, low maintenance, fully automated, efficient and long term sustainable in order for Wiz-Tec to receive amortized benefits.

The Government will see immediate benefits from the program from the start, and increasingly over time when further control and security are implemented and enforced. Wiz-Tec will be at a loss and bears all the risk during startup. Wiz-Tec will receive benefit when the program is sustained over a long term.

Upon closer evaluation of our entire NSIFTE maintenance and operation statistics, this Paper is deemed a very viable and practical business over time. When we are given the Government's full assistance in penetration and compliance, especially when populated over multiple provinces where administration, maintenance and services can be streamlined. Technical risk is at minimum and can be confidently overcome within the existing technical resources. Maintenance and service costs are high, though risk for failure is capped at a minimum. Sufficient startup funding is budgeted and allocated, the operational cost is pro-rated and incremental according to deployment, the only high risk factor is the Government willingness, assistance and assurance to carry forward.

No doubt some of the low volume retailers cost more than they will provide benefit, though it is averaged out when full compliance is reached. This is no different than telephone companies obtaining majority benefits for urban cities while covering rural areas at cost or lost basis. Without the Government's maximum assistance and assurance, Wiz-Tec has no choice but to pass some startup costs to retailers and focus on large volume premium retailers in order to minimize risk, cost and startup losses. It is primarily beneficial to the Government.

#### **40. What are the optional benefits for the Bands and Retailers?**

IPOS device is capable of processing many other forms of claims in addition to tax exemptions, and can communicate with multiple Merchant Servers other than for ITE claims.

In order to maximize participation by the retailers without any resistance by the Bands, Wiz-Tec may, depending on cost justification and others reasons, choose to offer other optional services deemed beneficial to the customer. Only after Wiz-Tec is assured of its long-term sustainability of the ITE business. These services are technology oriented, generally unavailable on Reserve, and will help enhance their retail business.

For retailers, the gift cards and charge cards. These "cards" are simply various forms of loyalty programs most large retail chains employ with proven business success. The importance and benefits are proven, though very complex and expensive. In simple words, gift cards, like a private credit card, will provide assured payments to secure purchases in advance, and provides great cash-less conveniences for their customers. Charge cards will help retailers attract and secure business customers like the Band or Fleets for their volume purchase.

For the Band, other than the indirect benefit of "charge cards", Wiz-Tec may offer Band issued credit or charge cards that can be used at any participating retailers. Wiz-Tec has the technological and functional expertise to certify the system with the major banks and credit card institutions). This will help Bands administer their internal business and welfare programs, and keep "Indian businesses on Reserve" which they are conscious of.

Government do not need to concern themselves that these programs create a "dependency", because there is no complexity to interfere. It is the same IPOS device, under the same design and implementation, processed through Merchant Server Wiz-Tec hosts and maintains separately.

On the contrary, in addition to helping penetrate the Government's ITE program, it provides many combined benefits. Once the retailer prompts, benefits from and relies on their own program, their business becomes dependent on the device, which in turn creates a dependency on compliance to the ITE program.

If and when communication failure occurs, they are more prompt and responsive to action, thus helping to maintain stability and sustainability of the ITE program itself, and assure that the ITE continues to be Indian self-funded. Any of the participating retailers or Bands has the option to participate or withdraw any time.

These optional benefits are not considered a benefit to Wiz-Tec, not when Wiz-Tec pays to host and maintain every Merchant Server for each participating retailer and/or Band. Loyalty programs are extremely expensive, tens to hundreds of millions per annum, and generally only available to very large retail chains. At the same time, if Wiz-Tec is assured of its ITE business, it becomes viable to offer and provide these services, to help ITE penetration and long term sustainability from the Indian side.

If the Government commits to only designate the "physical server purchase" option in the future, these optional benefits will likely be offered. These optional benefits provide a marketing strategy for technical and business aid for service typically "wished for" but not now available. At a minimum, it will help reduce resistance from Retailers and Band.

Furthermore, for retailers who do not have automated pump control and/or POS, Wiz-Tec may offer minimal cost POS and/or pump control integration, for the sole purpose of "technical aid" for penetration. It is an optional benefit of the new ITE program to retailers, for provinces other than AITE and SITE.

POS and associated retailer services have been Wiz-Tec's core business focus for the past 15 years. In addition, Wiz-Tec provides all the funding to develop complex enterprise solutions like Merchant Server and AGT. We are very knowledgeable and highly experienced within the very competitive POS and retail market.

Likewise when dealing with 3<sup>rd</sup> party certified POS integration. Operational and interface layers are separated to effectively remove the POS dependency. For AITE and SITE, which already have very expensive systems which their entire ITE program depends upon, Wiz-Tec will make sure to avoid any possible interest conflicts. Removing POS dependency is part of the design and goal of this new ITE program, including removing dependency for Wiz-Tec's POS for AITE and SITE.

In addition, gas station retailers will have the benefit of access to our electronic pump control and integrated banking debit/credit pay at pump products, which will bring up their technology to the common market levels outside reserve. This includes Wiz-Tec's exclusively developed AGT hardware products, to provide fleet or community based solutions (e.g. Band, airports, marine depots, couriers, car rentals, municipal or small townships).

These applications are totally separate and independent from the ITE program, though fully compatible with IPOS deployment. The program will allow a band to issue and administer their own private labeled credit or smart cards, and AGT is closely associated with non-ITE Merchant Server for real-time central validation, capturing and processing of credit, debit or gift accounts for a fleet-card program.

#### **41. Why and how will the new ITE program do a better job on "communications"**

This is the same question as how Visa/MasterCard and the Banking industry deal with it. The ADR Server is a critical component of the Merchant Server dedicated to communications and error recoveries.

- AITE/SITE are server initiated communication, connecting to retailers. Merchant Server is retailer initiated connecting to the server. AITE/SITE as the "initiator" has to know and recover communication errors, which it would not know until the next day, and the ability to control the interruption is limited because it is likely to be at the retailer end. When Merchant Server is acted upon, the retailer, as the "initiator", will know they are down. As a result, they are responsible to recover the communication in order to make ITE claims. So they will get pressure from their customers, and act upon the issue immediately.
- AITE/SITE rely on 3rd party software (Blast/PCAnywhere) and their ability for error handling and recovery. 3rd party software is designed to be under "manual operation", to be "automatic" is an atypical application. Blast is not designed for this type of application, it is no longer supported, and will not customize to handle errors and error recoveries other than the "logs". PCAnywhere is a "remote control" application custom adapted due to its popularity (90 million users). This is why the Banks do not use 3rd party, but rather custom develop for the job. The ADR Server has 60% of its communication code to deal with various potential communication errors, handle them and automatically recover the error. The result of our "custom" approach is shown in Nova Scotia, 98.5% success rate, and most of the 1.5% of errors which occur will be "automatically" recovered.
- AITE/SITE uses a single form of communication, dial-up modem, which is the most troublesome, as "connection" counts for most of the communication failures. Merchant Server

uses all forms of communications. Dedicated communication has 99.9% or better success rates, because it is dedicated without the requirement of "connection". Among Indian Retailers, as of now about 50% have dedicated line coverage, and over time it will be 100%, which includes cable, DSL, VPN, satellite, wireless. And for modem based dial-up, Merchant Server uses an industry standard TCP/IP (internet) communication, and directly works on serial and Modem hardware for error detection and recovery. In addition, every communication other than the retailer phone line (which is retailer's responsibility) has a failsafe backup

This how the bank is doing it. The Banks dedicated line relies on "Datapac 3201" which is a X.25 dedicated lease phone line. For dial-up, they use "Datapac 3101". Datapac is outdated, very expensive, and has been gradually replaced by TCP/IP for the past 5 years.

Just like the Visa/MasterCard, Merchant Server is designed to have "last resort" communication error handling, called SAF (Store and Forward). The system will annoyingly warn the retailer of their communication problem by asking them to correct it, while at the same time allowing the processing of some transactions locally by the device using separate "I.D. validation rules". It will not process more than "X" number of transactions, and the amount could not exceed "Y". Under banking terms, it is called "Force-Post" and is subject to "Charge-Back" or rejections.

## Comparison between Visa/MasterCard and Merchant Server

From a technical and implementation point of view, Merchant Server and Visa/MasterCard servers are the same, both are for claim validation and capturing applications, and are 95% alike. This further extends to the current bank debit system, with Merchant Server's flexibility and Security. Pin Number implementations. Obviously, with far less development, maintenance and operational resources, Merchant Server is designed and implemented to be suitable for small to medium size applications while leaving room for expansion and upgrades to much a larger scale. It is further streamlined, and automated, to reduce maintenance and administration costs, with reasonable tolerance factors. This comparison chart only describes the obvious functional components.

	Visa/MasterCard and Banking	Merchant Server/iPOS
Application	Proprietary, server based authorization and capturing for payment	Proprietary, server based authorization and capturing for claims (and payment)
Target Market	General Retail	General Retail and governments
Cost to Retailers	Communication line, cost of PinPad device purchased or leased/rented, some monthly fixed cost for Visa/Master Merchant account, 2.5% of gross for Visa/MasterCard, transactional charge to individuals for bank debit	Communication line, cost of device purchased or leased/rented, 2.5% of gross
Server	Large Scale, Server based, multiple concurrent processing, support of SAF	Expendable, small to medium scale, server based, multiple concurrent processing, support of SAF
Average processing	Millions of transactions per day. 7 to 15 seconds for dedicate line, 45 seconds for dial-up	10 to 50 thousand transactions per day, scalable. 5 to 10 seconds for dedicate line, 45 seconds for dial-up
Communication	Client Initiated, phone line and modem, recently secure TCP/IP via public internet in replace of aging Datapac (X.25)	Client Initiated, phone line and modem, secure TCP/IP as standard,
Primary cause of interruption for service	Communication line. Clustered servers are hosted by secure data centers, live wired backup via replication.	Communication line. Server is hosted by secure data center, live wired backup via replication. Server clustering optional
Communication security, modem	None for datapac and modem dial-up	AES encryption standard

Communication TCP/IP security	SSL or VPN encryption	SSL, VPN and/or AES encryption
Messaging protocol	Proprietary, ASCII text based, some are base24 or base64 encoded	Proprietary. Transactions are ASCII text based, base64 encoding for encrypted data. Administrations are either html or binary based
Data encryption standard	None for Visa/MasterCard, old and less secure 56 bit DES for Bank on Pin number only	Optional AES, 256 bit AES on Pin number
Digital Signature for data integrity	None for Visa/MasterCard, DES Macing for bank debit transactions	AES digital signature
Encryption Key distribution	Combination of private, device and public private key	Combination of private, device and public private key
Pin Number security	By 56 bit DES encryption for bank debits. None for Visa/MasterCard	Full 256 bit AES encryption
Pin Number distribution	DES encrypted Pin Number distributed over the wire encrypted. Subject to security risk	Pin Number is not distributed over the wire. 256 bit AES encrypted. Not subject to security risk (can not be replicated)
Pin Number requirements	None for Visa/MasterCard, all for Bank debits	Server configurable, conditional upon entry type and over-limits.
POS dependency	None. Standalone, and most interface with 3rd party POS software. When retailer choose for integrated POS, becomes retailer dependency, but not the system. Server interface to POS is native without intermediate layers.	None. Standalone, interface mechanism with 3rd party POS software. If retailer decides on integrated POS, becomes retailer dependency, though at minimum because Wiz-Tec provides pre-build intermediate drivers between POS and Merchant Server.
Retailer requirements	PinPad required for banking debit, Visa/MasterCard requirement by 2010	Optional PinPad device only if Pin Number is required.
Debit card I.D.	Mag-stripe Track 1/2. SmartCard for Visa/MasterCard by 2010 (not active)	Mag-stripe Track 1/2/3. Barcodes, 2-D driver's license barcode, SmartCard, iButton
Manual card I.D. entry	Allowed for Visa/MasterCard, not allowed for bank debits	Allowed with additional validation configured by the server
Additional Entry validation	Expiry Date for Visa/MasterCard. None for bank debit, for manual entry only	Optional validation of expiry date, issue date, birth date, phone number. Upon manual entry, over-limit
Source of abuse	Card I.D. and manual entry for Visa/MasterCard without Pin Number,	Card I.D. and manual entry. Highly secure with AES and digital signature

or fraud	possible false charges submitted by retailers for Visa/MasterCard, various forms of fraud including electronic fraud and identity theft. Note, Visa/MasterCard is upgrading to Pin Number by 2010, banking debit only at planning stage to use AES encryption in place of DES.	technology. Possible false claims submitted by retailers without Pin Number. AES encryption as standard. Flexible and configurable Pin Number security not subject to electronic encryption attacks. Optional additional validation against manual entry without Pin Number
Adaptation and upgrades	Relatively costly because various 3rd party PinPad, upgrade onsite, remote firmware upgrade not possible. Require 3rd Party POS software changes.	Minimum cost, mostly offsite, with single platform deployment via remote firmware upgrade. If 3rd party POS used, upgrade limited to replacement of CD and software drivers in most cases
Sustainability by design	20 to 30 years without design changes around security against fraud. Does not support remote firmware upgrade	20 to 30 years, or more, without design changes around security against fraud. Support remote firmware upgrade
Product validation	None. Not required. Capturing for net payment only.	Required for product validation and tax calculation. Dual validated at server.
Cost of POS	Not required and optional, retailer purchased. Full POS costs \$10,000 to \$25,000 per lane.	Not required and optional, retailer purchased. Device has optional POS and pump control functions. Full POS costs \$10,000 to \$30,000 per lane.
Cost of PinPad device	Around \$1200, purchased, leased or rented. Optional printers.	Around \$3000, purchased, leased or rented. Optional barcode scanners and printers.
PinPad device	Varies by 3rd party, small embedded application, firmware pre-built and distributed with the device. Some sophisticated PinPads are embedded PC based and runs on either embedded WindowsCE, embedded Linux or PalmOS. Does not co-exist nor is it compatible with standard PC hosting 3rd party POS applications.	Embedded PC based, multi-platform, runs but does not require Windows or Linux. Build-in embedded Linux OS. Fully configurable and scalable. Supports modern devices like touch screen, wireless, etc. Compatible, may co-exist and share the same PC to host both POS and iPOS application at the same time.
Footprint and Counter space	Small but requires. small integrated keypad and LCD display.	Medium, may be hidden under the counter. Standard or medium size POS keypad, on standard monitor display. Optional devices like printer, scanner does require respectful counter space.
Custom change of firmware or software	Impossible otherwise extremely costly, plus re-production and re-distribution	Minimum cost, remote software or firmware distribution at the server in most cases.
Other POS	No, only for payment authorization	Yes, and optional to capture non-eligible

functions	and capturing. Rejections are captured	transactions. Rejections are logged at the server.
Ownership	Proprietary, software licensed to retailers	Proprietary, software licensed to retailers and the government.
Deployment model	Certified PinPad distributed and custom installed at retailers.	Either custom installed, or mailed with free CD for self installation. At minimum, no installation, will run otherwise boot directly from CD.

### About the Visa/MasterCard 2010 standard

For the most part, Visa and MasterCard security is at a minimum. Since 1999, Visa/MasterCard introduced a static three security digit sequence printed on the back of the card as additional security for manual card entries, primarily for phone and mail order businesses. This is the equivalent of our additional validation, which occurs upon manual entry or over-limit transactions, as in the case of Nova Scotia where we use the "issue date".

Visa/MasterCard intend to deploy a SmartCard (the I.C. chip in the card) but are encountering difficulty in retailer compliance due to its dependency to 3<sup>rd</sup> party PinPad manufacturers and agreements with the banks. Industry is well aware that secure Pin Numbers are deemed to be the most effective method used in the debit banking industry. It is the Visa/MasterCard 2010 standard to use the combination of either SmartCard or Pin Number with an upgraded 128 bit encryption security application.

Merchant Server already supports these in its standard, and it is an option for the government to designate, using even more secure 256 bit encryption. The Bank debit industry is using 56 bit DES encryption, which is deemed weak for security. Even still, electronic transmission of native Pin Number could become a serious threat. Despite having been considered under the planning stage, there has not been any mandate to upgrade its encryption standard. To overcome the battle of possible interception of Pin Number over the wire, Visa/MasterCard use the SmartCard to accompany the Pin Number validation process.

At its initial design stage, utilizing the exclusive Wiz-Tec Pinner60 technology, Merchant Server recognizes and uses alternative methodology for Pin Number validation, which is completely secure on top of AES encryption. By this we mean the Pin Number is not transmitted and transmission is AES key based, which changes upon each connection.

In conclusion, Merchant Server has superior and practical design and implementations beyond the current 2010 security standard. This shows how serious Wiz-Tec considers security against abuse and fraud. Denial of abuse and fraud is merely ignoring the obvious.

### Transactions Supported

	Visa/MasterCard and Banking	Merchant Server/iPOS
Purchase	Yes	Yes

Return	Yes	Yes
Reversal/Void	Yes	Yes
AGR reversal	Some	Conditional
Payment	Some, not common	Conditional
Balance Inquiry	Some, not common	Yes, optional
Two Stage Pre-Auth Completion	Yes. Secondary for Pay at Pump and Hospitality business.	Yes. Primary. Mandatory if optional Pin Number and server based additional I.D. validation used.
Force Post	Yes, based on retailer agreement, subject to charge back.	Yes, based on government requirement
SAF	Yes, based on retailer agreement, subject to charge back	Yes, based on government requirement
Batch Totals	Previous and Current Batch Totals, otherwise via separate internet web based access or on paper at bank	52 week historical and current batch totals integrated.
Close Batch and Settlement	Yes. Some support server side automatic settlement	Yes. Automatic server side daily close batch and settlement.
Detail Reviews	No. Some support current detailed transaction review, local stored. Otherwise via separate internet web based access or on paper at bank	Yes. 12 week historical and current transaction details retrieved from server real-time
Server pushed messaging on demand	No.	Yes. Server may designate and publish messages shown on retailer device.
Build-in secure web access	Not common. Only on some high end expensive PinPad	Yes, optional. Can be configured to directly link to associated government's related web page.
Others	N/A	Merchant Server supports additional validations and transaction types not applicable and specific for tax claim applications thus can not be cross referenced.

## Appendix C File Specifications

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## Appendix D - POS Interface Specifications

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## Appendix E - Identified Issues within the AITE and SITE Programs

Examples of the inherent failures of programs such as AITE and SITE can be summed up in the following, of which none of these issues exist in the NSIFTE program, even in instances where there are similarities of design:

- AITE and SITE both publish and distribute all of their First Nation membership database information to each retail POS computer, transmitted naively over unsecured wire, which poses a significant security risk against privacy. If, or rather when, there is an exposed case of such abuse like "identity theft", the potential lawsuits and subsequent liabilities could be very significant. Small-scale media publication may end up being the "Waterloo" of their entire electronic ITE programs.
- AITE and SITE are based on a design meant to synchronize their central databases with each retailer on a daily basis, over unreliable modem communications. The retailer works and relies on the synchronized database as being accurate criteria (which it is not) to validate and file their claims. This type of synchronization is an unusual design and problematic, especially when the design is to synchronize the same database among tens of dozens of POS computers, at each retail location. Under technical terms, it is called data "replication" or service "clustering". Replication and clustering, either or, are very sophisticated and a very complex design to manage. While this is done in the NSIFTE program, all aspects of clustering and replication have been accounted for, and potential failure spots remedied.
- The AITE and SITE design of the "synchronization" are "changes only" on an incremental basis, without pre-designed fault tolerance and recovery mechanisms. Thus, it is a sequential process dependent solely upon a 100% success rate. If one day's synchronization fails, all the subsequent synchronization has become inaccurate.
- AITE and SITE use a single, unsecured and unreliable telephone line coupled with a modem as the primary communication carrier for synchronization. Further to this, AITE uses non-industry standard and very unpopular software, called Blast©. Neither Blast© nor PCAnywhere© (which has 90 million users worldwide) have been designed for this purpose. Rather they have been adapted and used based on availability. Industry standard, TCP/IP based, or at least non-proprietary communication alternatives should have been considered, like the Internet (dial-up, wireless or high speed Cable/DSL), SSL or VPN.
- AITE and SITE communications are "server" initiated, which means the respective Government, whether they wish to accept it or not, assumes all responsibility related to communication tasks and problems. Even if the problem is at the retail end (typically), the provincial government is still responsible, because it's server initiated, which means it becomes the server's responsibility to actively manage, monitor, and recover from all communication errors and problems. This is a common rule and practice among the "initiator" and the "receiver". Unless the government can effectively assure successful communications, as in the case of the NSIFTE program, the communication should have been client initiated. This allows the retailer to have first hand knowledge of acceptance or denial, and be able to take immediate corrective action in real-time. This would also have the net effect of limiting the Government's liability.
- AITE and SITE are POS dependent. Making their programs become POS software and vendor dependent. It requires the retailer obtain a certified and costly POS system that presumably operates flawlessly. 95% of the POS functions are not ITE related, yet ITE tax claims are part of the final stage of the POS transaction. The result is that the other 95% of the POS functions and performance end up directly influencing the ITE program. This further

extends to the quality of the software, and the service and support provided by the POS vendor. The Government ends up suffering from guilt by association.

- AITE and SITE assume each retailer is actively maintaining its synchronized database and communication line, yet none of the retailer locations has high cost "IT" staff or even technologically competent managers for this task. Retailers are not in the computer business to start with. They are end-users taught specific tasks for which their systems are designed. The moment the system requires the retailer to go beyond these trained tasks, the retailer must rely on the vendor. This makes the AITE and SITE to be service quality dependent.
- AITE and SITE assume that reliable communications for synchronization are in place and occurring, which is not the case at all. Assuming the "synchronized" database at each retailer POS is accurate, is merely a delusion the Government has created for internal mollification. Even were it more than reasonable to assume that each retailer achieves a 95% success rate (the actual success rate as measured by Wiz-Tec is much lower) over 100 deployed POS systems on an annual 365 days basis. This average, which is generous, will result in significant amounts of errors. There is an old saying, *5% of the unanticipated errors and problems cause 95% of the work*. That work includes recovery, false claims and rejections, disputes and lawsuits. Empirically, it is well known that human error usually accounts for better than 5% of the errors that occur.
- AITE and SITE process "after the fact". The actual process and validation is at the server after the assumption of a successful synchronization, and after the actual transaction at the retailer site, where the exemption amount has been given to the individual. When the server rejects the claim and payment, it rejects to the retailer, who is already "out of pocket" for the amount rejected. Where the actual validation and processing should occur is at the "time of purchase" in a single transaction process, not a two-fold process that creates denial after the fact. This process should reject or accept the individual claimant for the purpose of exemption, and alleviate the retailer of the responsibility, since the retailer is accepting the exemption on the government's behalf. Often the retail operation is a Band owned entity, which relies on the revenue stream from the operation. When the retailer begins to have an accumulation of rejected claims, it will over time, set the stage to create significant disputes, possible lawsuits, serious erosion of trust, and the propagation of a cynical political attitude against the government.
- AITE and SITE design do not have sufficient I.D. security when validating a claim. By this we mean they do not have sufficient security features to serve as an I.D. Rather just a "white card" with a number that is easy to duplicate. This not only attracts abuse by individuals, but also results in server rejections due to invalid I.D., which then causes the retailer to be "out of pocket". SITE relies on manual entry, which defeats the whole purpose of eligibility validation.
- AITE and SITE assume all retailers and individuals are trustees, but the reality is both may abuse the system easily because both entities become the beneficiary of the exemption. Individuals who file the claim get tax-free goods, and the retailer receives tax exemptions and more business from those abusers.
- AITE and SITE rely on cashiers to police and validate for tax exemption eligibility. It is the height of folly to expect this, and makes AITE and SITE to be cashier or operator dependent. Simply put, it is not in their job description, nor can it truly be deemed their responsibility. Even if, through government regulation, it were a Cashiers responsibility, a customer dispute that caused a cashier personal injury or death would become the government's liability for having made such a requirement. This has happened in many cases in the credit card industry, and the card carrier has always been found at fault in every occurrence. Further more, most cashiers are only partially trained, and as a result of the low pay criteria, not static (staff rotate all the time in the retail industry).

The old adage "*Putting the Fox in charge of the Hen house*", is a completely appropriate definition of what is being done in this instance.

- AITE and SITE systems rely, and are closely tied, to all deployed POS systems, and thusly can not make changes or enhancements without prohibitive cost at each POS and the retail level in general. This impairs the ability for further enhancement, which is very unpractical in this fast paced technological world.
- AITE and SITE are what the software industry would consider "fat-client" applications, which is de-evolutionary to the industry standard and concept of claims automation. Amongst similar industry applications like Visa or MasterCard, it should be a "thin-client-server" application where the dedicated client initiates the communication, asks for authorization, and files the claim for the server to capture. AITE and SITE are based on publishing and synchronizing their server databases, initiating communication through the server, and post capturing the claim afterwards. This backward design assumes every "fat-client" is capable and in charge, and then later disputes at the server, thus producing the common effect of "magnifying" problems while populating.
- AITE and SITE implement a global, single "policy" standard, for limit of purchase, and exemptions. This means they manage rejections at a global level against the entire Indian population. Indians could easily challenge such a blanket policy under treaty rights. The result will be, and already does, create a political distrust and excuses for dispute from the whole Indian nation. The reverse is also true, since without imposing limits, the government loses control, and abuse ends up being sustained. This extends to those non-AITE and SITE provinces that process ITE based on quota or other formats that are rooted in the fundamental premise that the ITE programs are not truly treaty compliant. A proper design should not target the Indian nation as a whole, rather at the individual level. In another words, there should not be any policy, but rather an acceptance based on individual per use criteria.
- AITE and SITE have significant liability issues. Lawsuits occur and can become very costly, as a deferred result of inherited policy and design defects. For example, when retailers are denied for tax exemption payment for accumulated amounts "after the fact" (where the exemption has already been given to individuals) they will use legal measures to reclaim what they are entitled to. Another example of this is that the policy enforcement applies globally without consideration for bands, business or heavy users. This creates a net loss of benefit by stimulating legal disputes over treaty rights, and eventually serious tension between the First Nations and the government.
- *"AITE and SITE both accept multiple POS vendors and software, which is a benefit to ensure successful continuity of the ITE program for sustainability, as well as alternatives for retailers including continuity of service."*

This statement does not take into account the reality of the POS market place. During and after the limited amount of small business is consumed, the quality of service will deteriorate. Further, multiple software and hardware vendors create additional layers of complexity and dependency. Each manufacturer's software reliability and performance varies, and evolves over time, and because of the tight integration requirement between the server and POS, this makes upgrades and enhancements extremely difficult. Additionally, because the electronic claim program is conditional to the use of a certified POS vendor, the First Nations is effectively cut-off from the bulk of the POS Vendor market. The First Nations is an extremely small market, most large POS vendors, and retail POS chains used by Major Oil Companies, will not bother to customize for the benefit of the Government. There is no economic justification for large vendors to bother. The net effect of this is the viewpoint by the First Nations that the Government is again controlling their decision making ability, or at least influencing it.

- AITE and SITE have no means of security. Plain data is sent in its native format, which can be easily intercepted and obtained from every retailer's hard drive. Even the POS, (including Wiz-Tec's) which have reasonable security to prevent access to the information, still cannot compensate from the fact that the information originated from and returns to the server in a plain text file format. For those who want to create their own I.D., they simply take the government file and make their own cards with minimum or no technological knowledge required. Furthermore, transaction claims are not encrypted or validated. If there is a file corruption, it could cause either a false claim or rejection, in which case neither could be properly detected nor processed. As an example, when the claimed amount changes from \$100 to \$1000, there is no mechanism to validate if it is corrupted. Further to this, the retailer, with minimal computer capabilities, could easily make false claims by tampering with the plain text file to their advantage. Regardless, a system without security will result in electronic fraud and/or identity theft. This has a cost that can run into the millions, is accumulating, and is next to impossible to catch because no sufficient proof of evidence could be collected
- AITE and SITE do not provide an effective method for validation of qualifying products. AITE does require retailers to enter purchased receivables, which is a very good step, and one that SITE completely missed out in acting on. An effective ITE program should control and minimize unqualified products sold with tax exemption, including black-market tobacco. This is a form of retailer-initiated fraud, and not all First Nations retailers will comply. For those fraudulent retailers, it is easy enough to make false entries on received products. A better option or alternative should be to regulate the non-Indian tobacco suppliers, which are under the government's full regulatory control, requiring them to account for all products sold into First Nations Reserve retailers (which are to be tax exempted). This allows the government to cross-reference the inventories against the sales. Note that First Nation's producers and suppliers do not charge tax nor is their product qualified for tax exemption when distributed among First Nations and to First Nations retailers, or anywhere else for that matter. The worse case scenario would be to discover that black-market tobacco is being entered into a tax exemption claim program, which would essentially mean the government has become part of the funding source for illegal tobacco sales. Relying on UPC scanning and retailer manual purchase entry would not be sufficient to identify "qualifying products" for exemption, because the operating retailer is part of the problem. If AITE requires accountability and auditing of non-Indian tobacco suppliers, even manually by paper, it would be the right approach for qualifying product control.
- AITE and SITE have no security for I.D. identification, and no mechanism to eliminate manual I.D. entry. Without a fully populated database, a program designed in the manner of SITE can be considered worse and both rely heavily on manual entries without any validation. Manual entry is identified as having the most potential risk for abuse and fraud by Visa/MasterCard. Which those organizations calculate is beyond 15%, including illegal and legal businesses. Prime examples of weak security areas are mail order, telemarketing and Internet sales. We have all experienced and been advised not to "give a credit card number over the phone", for good reasons. Bank debit does not allow for any form of manual entry. Visa/MasterCard introduced their 3-digit security code, which is similar in principle to Wiz-Tec introducing issue date entry validation to Nova Scotia, for the same reason, to help control manual I.D. entries. AITE and SITE cards have no security whatsoever even without manual entry. In comparison, Nova Scotia uses the Driver's License and is now introducing the latest 2-D barcode security, and extraction on all three mag-stripe tracks using two of the stripes to form a valid I.D. Pin number entry has been deemed the most effective I.D. validation. Our Merchant Server already uses all of these features, and is already beyond the Visa/MasterCard 2010 compliance standard. Comparably, AITE and SITE were wide open for abuse from the time of their inception as programs. Low volume remote reserve areas may not have serious problems, but those on the highway or next to urban cities are known to be an uncontrollable issue.

- AITE and SITE use a very old method of "descriptive" transaction record format, instead of a modern "request-response" format standard used in the claim capture industry. Even worse, the "description" spans over multiple records and over the entire file. This means that the entire file is dependent on 100% accuracy. When that information is sent over unreliable telephone line transmission without any detection or redundancy measures, as in the case of AITE, errors occur. One bit or byte error (i.e. 1/100,000 chances on a common size 100K file) in the descriptor will cause error for all the records following after. It would corrupt the entire file processed. AITE and SITE relies 100% on these troublesome files to achieve the database "synchronization" among all POS systems, essentially yielding to POS database corruption over and over again. Furthermore, there is no validation mechanism for POS to report the error, and even if it's detected, the POS could not do anything about it. Discarding the file will cause "out-of-sync", and continue to process will cause "data corruption". Mainly because of synchronization being server initiated on "change only", and because the AITE server side does not recognize the error or recover it.
- AITE and SITE, without any control and security against abuse, literally invites the retailer to abuse the system. By posting significantly lower priced fuel and tobacco, Indian retailers attract many non-Indian customers around the urban centers or busy highways. By simply entering a known Status number, the retailers gain more business via abuse against those who comply. Some retailers even alter their receipt of the true amount, and hide and keep a significant portion, thus only part of the ITE tax exemption gets delivered to eligible Indians. Some POS companies would promote this as a cost leverage between their POS against retailer gained benefit, and in doing so obtain a competitor advantage over other POS vendors. One may argue it is the cost of business doing for retailers, and is between Indian retailers and individuals Indians. The reality is that alternation of a transaction receipt for the actual amount and hiding the portion kept is a form of fraud as well. It is comparable to acknowledging retailers charging 15% GST but only print 7% on the receipt. The Government is in effect promoting such abuse, and technically an accomplice to a fraud.
- AITE and SITE are not sustainable long term, which they both wish to be. By introducing multiple POS vendors for competition and alternatives, the two provinces have left themselves open to the foibles of an uncertain marketplace. The high cost and complexity of POS prohibits maximum compliance, and competition disappears once a small market is consumed. The old technology and implementations can not be upgraded, due to design flaws and the POS dependency, and disputes continue to occur due to its incomplete treaty compliance. 5 to 6 years after SITE and AITE, the results have proven themselves out and resolution to all parties needs have remained illusive. At the same time, Visa/MasterCard and the electronic payment systems have been sustained, and continuously enhanced for the past 30 years. Design an airplane that can be modified and enhanced while continuously flying in the air for 20 years is not a easy thing to do.
- AITE and SITE are not truly treaty compliant. Even if one disregards the disputes and denials for those not participating into the AITE and SITE programs, for those that are participating, the universal quota as a base criteria for exemption acceptance and denials is a very offensive policy. Furthermore, to avoid disputes with individual First Nations for their exemption rights, the government tends to accept "over-limit" from individuals which creates great risk and potential for abuse and fraud. At the same time, the government denies the retailers for rebate payments, which means the retailer is out of pocket. This brings the disputes to the retailers which are much stronger than individuals, because of having greater financial wherewithal and resource backup. Typically, half of these retailers are Band owned which makes for an even bigger nightmare for the government. A proper ITE program should truthfully comply with the treaty, give tax exemptions directly to the due individuals, bypassing retailers and Bands to be administered at the level of the individual. The program is not about blind denial of exemptions to retailers or eligible First Nations, but rather to effectively eliminate abuse and fraud, including those non-First Nation's individuals seeking advantage.