



White Paper

Wireless & Cashless Vending in Hotels



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Executive Summary

The purpose of this white paper is to explore the cashless vending opportunity in the hotel industry. Today, an overwhelming majority of vending machines accept only cash for payment. As a result, hotel guests and visitors often cannot fulfill their needs if they do not have correct change. This paper intends to inform hoteliers and vending operators on the “cashless vending” opportunity in the hotel industry. The growing preference for cashless payment methods like hotel room key cards, credit cards and mobile phones present a compelling case for cashless vending. In addition, the threat of vandalism and the need to deploy personnel for cash management are the most significant challenges facing hotels and vending operators managing cash based vending machines.

A pioneering “wireless LAN” based solution from cStar Technologies, the first of its kind in Canada, permits guests to buy drinks by using their hotel room key card or any mobile phone. The cost of the drink is then posted to the guest’s room bill for payment. The integration to hotel property management system (PMS) eliminates expensive wireless WAN airtime and credit card processing charges. The cStar solution also provides real-time data management capabilities, which enable vending operators to manage stock, health and welfare of vending machines. The cStar value proposition can increase vending sales by 30-50% and significantly reduce operating costs by eliminating vandalism and expensive cash management tasks.

Background

The hospitality industry is constantly striving to raise the customer service bar in an effort to capture a larger portion of the traveler's dollar. Hotel operators are increasingly investing in new technological innovations that continuously motivate the public to travel and spend dollars on hotel property. Hotels have been among the early adopters of vending machines. With more than eight million machines, the vending industry is the largest cash business and the most pervasive retail channel in North America.

According to a 2003 Nielsen report, only 2-3% of the vending machines in the US offer a cashless payment option. In the hotel industry, the usage of hotel key cards, prepaid cards and mobile phones by hotel guests and visitors make the cashless vending opportunity attractive. For hotels, speed, convenience, accountability and security are just a few of the advantages of cashless vending. From a vending operator's perspective, increased sales and profitability, improved efficiency as well as the potential for strategic marketing and flexible pricing options, render cashless a much more appealing payment option.

Challenges Facing Vending Operators in the Hotel Industry

The vending ecosystem in a hotel comprises of the following key stakeholders:

- Hoteliers
- Vending Operators
- Hotel Room Guests & Visitors

The cash based vending environment poses different challenges to these stakeholders.

Hoteliers:

- Lack of transparency on the amount of commission paid by vending operator to hotel for sales, as cash collection is done by vending operator
 - Hotel can lose money if they don't know the exact amount of vending sales
- Cash in vending machines attracts thieves who vandalize machines
 - ⇒ Unsafe hotel perception by guests
 - ⇒ Hotel loses commission due to cash theft from vending machines
 - ⇒ Hotel can suffer losses due to other thefts from their premises
 - ⇒ Loss of business
- Consumption of time and energy providing coin exchange service and reporting stock-outs or malfunctions to the vending operator
 - ⇒ Reduced time efficiency for customer service

Vending Operators:

- Fraudulent cash shrinkage due to operator's lack of detailed trace-ability in cash collection
 - ⇒ Operator can suffer losses
- Deployment of personnel and investment in a cash counting machine for cash collection, counting, depositing to the bank

- ⇒ Operating costs for the vending operator increases
- Cash in vending machines attracts thieves
 - ⇒ Vandalism results in loss of cash, lost sales due to machine downtime and increased machine maintenance costs
- Coin and Bill Acceptor update upon new coin or bill introduction

Hotel Guests & Visitors:

- Lack of accurate change
 - ⇒ Hotel guest is unable to make a purchase
- Lack of adequate change
 - ⇒ Hotel guest can not to make additional purchases
- Coin jams in vending machines
 - ⇒ Hotel guest suffers loss due to malfunctioning machine
- No receipts for vending purchases
 - ⇒ Business guests can not expense the purchases

Several cashless vending technologies in the market today are:

1) The wired cashless vending solution

- ***Installation of a telephone line to connect the vending machine to the payment processor:*** The hotel and the vending operator incur a charge of \$40 per month for using the telephone line. There is an initial high cost of the line installation.
- ***Vending machine suffers from lack of mobility:*** Due to a wired telephone connection, the vending machine cannot be moved easily within the hotel premises. The hotel needs to re-run the telephone wire, if the vending machine has to be moved. This task of bringing the telephone wire entails installation cost and downtime for the vending machine leading to lost sales.

2) The wireless WAN (Cellular) solution

- ***Incurred costs for accessing the cellular network:*** The hotel or the vending operator needs to pay monthly service fee to the wireless service provider for using air time on the wireless WAN network, which is costly.
- ***Vending machine suffers from lack of mobility:*** In a hotel environment, the wireless WAN signal can be weak when the machines are located in the basement or on high floors. As a result the locations must be tested before the vending machine is moved, and the workable locations may not be the desirable locations.

Both the above solutions require a hosted backend application for processing the vending transaction requests and interfacing to a credit card processor. These solutions often cannot accommodate hotel room key card based cashless vending.

3) A third alternative: cStar's Vending Genie™ Hospitality solution.

The cStar's unique approach to cashless vending leverages its high penetration wireless LAN, SkyGate® and highly adaptable eDispense™ HT application that interfaces with the hotel Property Management System (PMS) for enclosed payment settlement.



The cStar Solution

cStar's cashless wireless vending solution called **Vending Genie™ Hospitality** is a real-time wireless transaction management system, which enables cell phone vending, card vending, and vending data retrieval. cStar is the only company in the world to offer a cashless vending solution based on hotel room key card combined with cell phone over specially designed long distance reach wireless LAN (WLAN). Consumers have a greater choice of payment methods like cell phones or cards (hotel room key cards, credit cards, prepaid cards, etc).

The key components of the **Vending Genie™ Hospitality** solution are:

- **SkyGate® Terminal** – A wireless transmission and receiving device which supports communication between the vending machine and SkyGate® base station system. It support vending machine DEX and MDB boards and equipped with magnetic-stripe card reader and a LED display.
- **SkyGate® Base Station** – A wireless transmission base station that capable of supporting 256 terminals/endnodes.
- **eDispense™ HT** – Desktop application that manages vending transactions and interfaces with the hotel Property Management System (PMS) in providing enclosed payment settlement, 24-hour access to beverages in a secure environment.

The benefits of cStar's **Vending Genie™ Hospitality** solution compared to solutions using telephone lines and wireless WAN are as follows:

Benefits of cStar's solution compared to telephone line

- Elimination of the costly installation of telephone wire
- Elimination of waiting time for installation of telephone wire
- Elimination of monthly charges for using telephone line (Save \$40 per machine per month)
- Flexibility to shift vending machine to any other location
- No monthly credit card processing charges

Benefits of cStar's solution compared to wWAN

- Strong wireless signal penetrates even thick concrete floors & walls of high-rise hotels.
- Ability to move vending machine to any location in the hotel environment
- No monthly airtime charges
- No monthly credit card processing charges

For a greater operational cost reduction, cStar Route Manager® can easily integrate with cStar Vending Genie™ Hospitality cashless vending solution for efficient vending route management and remote vending machine monitoring.

cStar's Value Proposition for the Key Stakeholders

The cStar wireless/cashless solution offers various tangible and intangible benefits to the key stakeholders in the vending ecosystem.

Hoteliers:

- Accurate data on sales due to the integration of the cashless vending solution with the hotel guest billing system
 - ⇒ Increased commission can be collected on the exact amount of vending sales
- Deterrence of thieves
 - ⇒ Vandalism is eliminated and hotel premises are protected from other thefts
 - ⇒ Vending revenues are intact leading to higher sales commissions for the hotel
- Hotel staff does not have to spend time providing coin exchange service to the customers who do not have the correct change for the vending machines
 - ⇒ By focusing on important customer service functions, the hotel's brand name and reputation is enhanced

Vending Operators:

- Competitive advantage and a strategic marketing tool
 - ⇒ Operator can win new accounts and retain existing accounts
- No internal shrinkage
- Elimination of vandalism & theft
- Reduced machine downtime
- Extended convenience to customers
- 30-50% increase in sales
- Significant increase in profit from increases in sales & decreases in expenses.
 - ⇒ Higher profit margin on the incremental sales
 - ⇒ Elimination of cash management
 - ⇒ Elimination of coin mechanism and bill acceptor
 - ⇒ 50-80% decrease in machine maintenance service

Hotel Guests:

- Convenience to hotel guests in fulfilling their thirst needs 24/7 without impediments.
- Ease of multiple purchases with hotel room key cards
- The business guests incur no out of pocket payment for beverage purchases. The beverage purchases become part of hotel room charge.

Case Study: Ambassador Conference Resort in Kingston, Ontario

Canada's First Wireless and Cashless Vending Machine Trial

In March 2005, in collaboration with Bell Canada as the systems integrator and Coca-Cola Bottling Company, cStar Technologies Inc. successfully launched the first wireless and cashless vending machine technology trial in Kingston, Ontario. cStar Technologies' Vending Genie™ *Hospitality* system was integrated to the hotel PMS and room key card system.

The pilot project is the first of its kind to combine mobile phone and room key card technologies operating over a wireless LAN network. Guests at the Ambassador Conference Resort were able to get their favorite beverages by simply swiping their hotel room key card through the machine's card reader or by using any mobile phone. The cost of the drink is then tagged to the guest's room bill for payment upon checkout. A total of eight machines at the hotel were networked with the wireless LAN. Drinks available included Coca-Cola beverages such as waters, juices, soft drinks, juice drinks, sport drinks and ice teas.

The majority of the hotel guests used their hotel room key card for making a purchase. The prepaid cards and mobile phones were used by visitors and conference participants who did not stay at the hotel. Prepaid cards were available for purchase at the hotel. The results of the 90-day trial was a resounding success.

- Overwhelming results included no instances of attempted vandalism to the machines and most significantly, improved guest experience.
- The vending machines recorded a substantial increase in sales.
- Customer experience and feedback was extremely positive.
- Proprietor feedback was 100% - guest service and experience.
- System reliability was 99.9% (environmental factors make up the remaining 0.1%)

"The owners, management and staff of the Ambassador are absolutely delighted with the cashless vending program and we want to keep it forever. The ease of use, the convenience for our guests, the absolute elimination of attempted vandalism to these vending machines, the increase in usage... this is definitely a WIN, WIN, WIN, WIN solution. We are indeed privileged and fortunate to have been considered as the test pilot for this exciting, innovative technology advance."

- Venicio Rebelo, General Manager, Ambassador Conference Resort

Conclusion

Cashless vending is a clear win-win proposition for vending operators and hoteliers hence it holds a strong future in the market. Vending operators also are finding that cashless vending can be a source of competitive advantage in winning new customer accounts. Significantly, cashless payments have shown to increase customer spending, leading to incremental sales for vending operators and hotels. The guest-centric hotels and vending operators need to take the lead in fostering the cashless vending revolution through alternative payment methods like hotel keycards, prepaid cards and mobile phones.

The stakeholders in cashless vending need to determine which technology based cashless vending has best ROI and also low on-going cost. The cStar's Vending Genie™ *Hospitality* solution with its distinctive high penetrating wireless LAN, SkyGate® and its highly adaptable application eDispense™ HT, make drop-ship deployment possible in any hotels in the world, irregardless of hotel's complex heterogeneous IT environment.

The significant increase in sales combined with the reduction in machine service expenses from the deployment of cStar Vending Genie™ *Hospitality* solution, the payback period of less than 1 year can be achieved.



About cStar Technologies Inc.

Founded in 1998, cStar Technologies Inc. specializes in two-way, wireless data communication solutions for M2M (machine-to-machine, machine-to-men, machine-to-mobile) and mobile-commerce applications. We develop and market communication products that wirelessly connect companies' non-IT assets to their IT systems, enabling them to monitor, control and manage machines remotely, to automate various processes and to create value-added services. Our wireless technologies encompass RFID, wireless LAN, wireless WAN and Internet.

Based on internationally patented Wireless Transport Protocol and Virtual Gateway technologies, our wireless, cashless, automatic supply chain management tools deliver an end-to-end solution for supply problems affecting various industries. In addition, with our advanced wireless data communication technologies, technical knowledge, experiences and flexibility, we provide customized mobile M2M solutions to meet the unique requirements of specific customers.

If you would like further information about cStar Vending Genie™ *Hospitality* solution or other cStar solutions, please contact us at:

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