

Study: Guests value virtual nutritional menus, table pagers

BY ALAN J. LIDDLE

ITHACA, N.Y. — A comparison study of restaurant technologies found that consumers felt tableside displays of virtual menus with nutritional information to be the most valuable, followed by pagers for table management and hand-held point-of-sale terminals for line busting, Cornell University researchers said.

A recently released report of the study's findings, "Customer Preferences for Restaurant Technology Innovations," also spells out a challenge tied to winning consumer acceptance of technology, and provides some information about the percentage of diners using specific technologies.

It was authored by Michael Dixon, Sheryl E. Kimes, Ph.D., and Rohit Verma, Ph. D., and was based on a summer 2008 survey of 1,737 consumers by the Center for Hospitality Research at the Cornell University School of Hotel Administration in Ithaca. Kimes is a Cornell professor, Verma is an associate professor, and Dixon is a Ph.D. candidate at the school.

The report is available online at www.hotelschool.cornell.edu/research/chrp/ubs/reports/2009.html.

"Restaurateurs need to make sure their customers will accept new technology when it is introduced, but we found a sort of catch-22," co-author Verma said. "We found that people who use a particular technology find that technology more valuable than those who never tried it. However, to see that benefit the customer first has to try the technology, and many people aren't quick to try new technologies."

To get past that obstacle, the report authors suggested, technology suppliers need to design devices and systems that appeal to consumers and are easy to use. Restaurants, they added, should be prepared to im-

plement guest-training programs when deploying new consumer-facing technologies.

The authors said they also "noticed that the earlier dining-stage technologies," such as virtual menus and pager systems, "seem to be preferred [by consumers] compared to later stages [such as] various payment options." In general, they said, consumers

zero indicated an unattractive technology, they said.

Using that method, the technology most valued by respondents, with a score of 100 percent, was a technology in very limited use today: tableside devices that display virtual menus with nutrition metrics for each item.

The next highest valued technologies



Online-reservation systems, such as the one used by the Il Fornaio Italian restaurant and bakery chain of Corte Madera, Calif., were among the technologies most valued by diners, according to a Cornell University School of Hotel Administration study.

must have the perception that a new technology enhances their control of the service they receive, or it could meet resistance.

Survey respondents were briefed on 11 restaurant technologies with the potential to accelerate service or increase guest convenience or help operators reduce costs or increase sales. Respondents were asked to value each technology relative to lists of such devices or systems.

Researchers said that for the sake of clarity in quantifying the respondents' relative technology preferences, they presented them in the form of percentages ranging from zero to 100. A score of 100 percent signified the most valuable technology, while

among respondents were pagers for table management, with 91 percent; handheld point-of-sale-terminals used by restaurant employees to reduce lines in counter-service operations, 89 percent; and online-reservation systems, 87 percent.

Respondents to the survey were mostly well-educated, having taken college classes or obtained degrees, researchers said. On average, they dine out 75 times a year and, most often, at quick-service establishments. People who answered survey questions were split evenly along gender lines, researchers noted, and younger respondents were more likely to have used more types of technologies than their older counterparts.

Beyond the four most valued technologies led by tableside virtual-menu displays, researchers said the other technologies scored as follows: virtual menus online with nutritional information, with a score of about 77 percent; kiosk-based food ordering, 74 percent; kiosk-based payment, 66 percent; Internet-based ordering, 54 percent; payment via RFID-chip-enabled "smart" card, 36 percent; payment via SMS/text message, 9 percent; and payment via cell phone using near-field-chip wireless-transmission technology, less than 1 percent.

Apart from their relative value survey, researchers asked respondents about their use, if any, of the 11 technologies investigated. Pagers systems had been used by 56 percent of the respondents and online-reservations systems by 32 percent, they said.

About 27 percent of the respondents said they had benefited from restaurant employee use of handheld POS for line busting, used Internet-based ordering systems or viewed online virtual menus with nutrition information. Approximately 24 percent said they have used kiosk-based ordering devices, 22 percent said they had used kiosk-based payment systems, and about 18 percent reported that they have operated tableside displays of virtual menus with nutrition metrics.

Less than 8 percent of the respondents said they have used "smart" payment cards, and about 4 percent said they have settled their dining tab using a cell phone with NFC technology or by way of text message.

Researchers said they found that the average value score for a technology increased significantly, by between 13 percent and 41 percent, among respondents who had actually tried the technology in question. ■

aliddle@nrm.com

FS/TEC panel offers insights into revised PCI security standards

BY PAUL FRUMKIN

ORLANDO, FLA. — Even as the foodservice industry

and other businesses digest the latest version of the Payment Card Industry Data Security Standards, experts agree that operators will have difficulty achieving full PCI compliance and completely protecting credit and debit card information.



Payment card security stakeholders speaking at the 14th annual International Foodservice Technology Exposition, or

FS/TEC, here in February acknowledged that PCI DSS Version 1.2, while improving on the initial release, nonetheless is no silver bullet.

"One-hundred-percent compliance is almost impossible, at least as far as I'm concerned," said Ci-

han Cobanoglu, associate professor of hospitality technology at the University of Delaware.

The standards were established to help ensure the adoption of consistent data security measures and enhance payment account security. Noncompliance by businesses accepting card payments can result in stiff financial penalties from card organizations.

Underscoring the difficulty businesses have protecting sensitive credit-card data from hackers

and other thieves, Cobanoglu cited a study that found the number of events in which card data were compromised more than doubled in 2007 compared with 2006. The vast majority of those problems, he continued, involved track data, which has a credit card number and an expiration date.

Other experts taking part in the payment card security panel discussion pointed to the recent breach of Heartland Payment Systems. In that breach, intruders

hacked into the computers used by Heartland to process payment card transactions for 175,000 merchants, including approximately 60,000 restaurants.

They also referred to an earlier breach at the Dallas-based Dave & Buster's casual-dining chain, in which three men allegedly hacked into multiple cash registers to steal data from thousands of credit and debit cards. Associated losses from that breach have been estimated at \$600,000.

Cobanoglu said fine-dining restaurants suffered the most in the restaurant industry from not being PCI-compliant. He pointed out some common barriers to compliance, including limited budget, lack of education, lack of tools to manage PCI, lack of qualified staff, and lack of details with the standards.

PCI DSS Version 1.2 clarifies some of the confusion among merchants raised by the initial release, but not all of it, observed David Starmer, vice president of information technology for Back Bay Restaurant Group in Boston.

The largest rewrite, he said, occurs in Requirement 1 — the standards have 12 requirements or standards — which states that routers are now included and should be treated the same as firewalls. Moreover, the new requirement restricts WEP, or wired equivalent privacy, deployments. According to the new regulations, new WEP implementation was banned as of March 31, 2009, while current implementation is banned after June 30, 2010.

Under the first release of PCI DSS Requirement 6, patches to software needed to be applied in 30 days. Now the standards condone a risk-based approach, which Starmer called “a little more prudent and realistic.” At the same time, he noted, “they tell you that you have to validate input, proper error handling, secure storage and others.” What’s more, the BBRG executive indicated, Requirement 6 now requires code review for common vulnerabilities or an application layer firewall in front of any Web-facing application.

Other changes incorporated into Version 1.2 mandate that operators set up cameras or other access control mechanisms in any data center or server room, and test for the presence of wireless points using a wireless analyzer on at least a quarterly basis, Starmer said.

David Denney, a practicing restaurant and hospitality industry attorney with The Law Offices of David Denney in Dallas, warned attendees, “The cost of noncompliance is incredibly high.”



From left: David Starmer, Back Bay Restaurant Group; David Denney, hospitality attorney; and Cihan Cobanoglu, University of Delaware.

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He said that under the standards, restaurateurs retain virtually all liabilities, including responsibility for charge backs, cardholder damages, the cost of reissuing stolen cards, credit card company attorneys fees, and fines and penalties for not being compliant.

“It can end up costing hundreds of thousands of dollars,” Denney said. “You know things are bad when insurance companies are writing policies for the problem.”

Denney advised attendees to

conduct a background check on employees who have access to cardholder data, but acknowledged that the practice can become “a paperwork mess” because of turnover. He also said franchise agreements generally shift the burden of compliance to the franchisee, but often franchisors fail to sufficiently educate the licensee about credit card security.

If a credit card system is breached, Denney advised, operators should immediately inform their legal counsel or counsel for

their franchisor, begin an investigation, take immediate steps to remedy the perceived threat and draft a press release utilizing the counsel’s input.

In general, though, panel participants advised attendees to review the policies and procedures in Version 1.2, and make sure they have adopted the changes.

“If you’re not compliant, you’re probably in good company because that’s most organizations,” Starmer said. “If you’re compliant today, you may not be tomorrow. It’s a moving target we’re after.” ■

pfrumkin@nrn.com

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