Technology tools to boost table game yields

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The development of new technologies is creating opportunities to optimize casino operations in a way that would not have been thought possible a decade ago, in particular when it comes to table management, though there is debate over which systems provide the best solution.

The ability to measure the performance metrics of live table games in a cost-effective and timely way has until

relatively recently eluded casino operators, who have been forced to rely on labour intensive manual counts during operational hours. This leaves a wide margin for human error, potential fraud and at the end of the day money on the table for the operator.

There are two main forms of technology now being used to help solve this issue, RFID and optical table sensors and suppliers of both claim significant expansion.

RFID stands for radio-frequency identification, a technology that uses radio waves to transmit information from RFID tags to an RFID reader.

In applications of RFID for casino gaming, a sensor at the table or cage reads the information on the gaming chip. It is similar to a barcode, except the tag is electronic rather than a physical image, and instead of reading just one barcode at a time, many RFID tags can be stacked together and read at once.

In the past, RFID technology has been criticized for not being capable of operating in a reliable way in a fast-paced environment such as a casino floor, where there is also confusion from many other electronic and electrical sources.

However, Walker Digital Table Systems (WDTS) claims to have overcome these issues with its PJM3.0 RFID, which it says its three times faster than other RFID technologies, being able to read 1,200 tags per second. Its edge is that it uses eight data channels across a broad range of frequencies. This means not only greater

speed but also greater resiliency and reliability in an electronically "noisy" casino environment.

"RFID table solutions are the key to automating manual table procedures, integrating data across casino systems, and enabling significant gains in operational efficiency, transaction accuracy, and game integrity," Neil Crossan, WDTS Chief Commercial Officer says.

"Our customers experience increases in game speed and the elimination of leakage drives incremental increase in table hold. Every customer that has invested has continued to expand their investment with WDTS, as the ROI is continuous and compelling."

"Table automation also eases the supervisors burden – resulting in increased customer service and focus, whilst real-time dealer metrics support coaching for optimal dealer performance. Even more exciting are new insights on aspects of table performance that are now available."

Crossan says "PJM3.0 has become the industry standard. There are alternate, slower RF technologies available in the market however all of the major chip manufacturers supply PJM RFID and it is the prevalent chip technology on Casino floors today. We do not require these customers to change their technology – our systems allow the customers to leverage the PJM chips they have. We encourage new Casino operators to adopt the advantages of PJM RFID chips at the outset,

and have had major operators convert to PJM, driven by the operational advantages our platform offers"

Detractors of the technology point to the fact that it's expensive to install, involving the replacement of casino's stock of chips. They also say that some RFID technology can actually slow gameplay.

Australian company SenSen Networks has an alternative solution that it says is cost-effective to install and equally as efficient.

It has developed a technology based on 3D Time of Flight (ToF) cameras that capture a multispectral, 3-dimensional view of all gaming tables.

The colour, infrared and depth-sensing technology determines the number of players at each table, number and type of bets placed and the value of all wagers. The accuracy and stability of the solution has been established on live games of Blackjack, Baccarat and various kinds of Poker providing real-time tracking of player demand.

The technology is able to monitor table occupancy; bet count; bet type; bet value; game start; game end; time between games and hands per hour.

"RFID-based solutions slow down the dealers and reduce the number games played thus reducing the turnover of the tables," SenSen CEO Subhash Challa says. "The SenSen Camera solution does not need a change to dealer or player behavior, layouts or chips and has no impact on game speed and dealer KPIs."

Challa said the technology received an "exceptional response" from operators at both G2E Macau 2018 and G2E Vegas 2018 and several of them progressed to trails within their own properties. He sees the biggest opportunities in Asia in Macau, the Philippines, Singapore and Malaysia.

RFID suppliers counter that optical technologies cannot provide the same level of security, or reliability to the casino operator.

"A critical advantage of RFID solutions over optical, is RFID's high speed and reliable identification of chip validity at a serialized level," WDTS says. "This means that RFID provides the protection against counterfeit chips that optical solutions cannot, as optical can give false positives for fake or invalid chips." Crossan also notes that that identifying chips at the serialized level allows operators to use the same cash chip set for all gaming activities that today requires the purchase and daily management of many different sets of cash chips, program play chips and junket chips. This reduction is a material saving for any casino.

With the rapid growth in casino properties across Asia, from the multi-billion IRs planned for Japan, to the smaller resorts mushrooming in Cambodia and elsewhere, there's room for sales growth for both technologies.