Undercover operations

G3 has been granted exclusive access to product trials of Gaming Partners International's latest RFID table gaming innovation, RFIDTablesSolution

The advancement of technology within traditional casino table gaming has taken two distinct paths; one overt, the other covert. The former, electronic table games, have flourished in the last decade, speeding up play; reducing staffing costs; providing a transition for slots players to table play; enabling 24hr operation etc. The benefits of e-table gaming are an established part of every casino, from fully automatic to the still fresh out-of-the-box hybrids that mix both elements of traditional and electronic play.

The second route, in regards to table play, is one that predominately disguises the use of technology. It does not alter the play and for the most part is invisible to the player, who would not tell the difference between what is essentially a piece of furniture on the one hand, and on the other its hi-tech connected counterpart. Leading the charge in this field, though not exclusively, has been the use of RFID in the table gaming environment. Radio-frequency identification has been part of the gaming lexicon for over a decade, though the majority of the work incorporating RFID in gaming has focused on the area of security. Several companies have promoted the ability of RFID to transform table play, embedding RFID tags into chips for far greater applications than the purposes of securing a casino's currency, but this continues to remain a small part of the RFID market at present.

While the security benefits of using RFID chips in casinos has been explored in depth, there has been little practical application in other areas of the gaming floor. Trials and tests have been ongoing, but until now, operators and manufacturers have been close-lipped about the performance of the technology.

THE PLANNING STAGE

G3 would like to thank Gaming Partners International for the opportunity to test a product so early in its development. While the test-bed casino wished to remain anonymous, GPIC granted unfettered access to the early development of the new platform, enabling us to test the product, interview the users and find out for ourselves how viable this product is for the casino marketplace. To our knowledge, this is the first time access has been granted during the gestation of a product en-route to market in the casino industry.

From laboratory to gaming floor Gaming Partners International set-up a fully-fledged test site in May 2008. A total of 11 server-based, RFID-enabled tables as well as cage and chip bank readers allowed for automatic chips inventories to be generated and tested on site. RFID table float trays are read on a continuous basis to provide exact inventory, calculate rolling floats, track fills and credits transactions, give win/loss ratio in real time with comprehensive reporting. As a result of its daily use, manual inventory has been halved while 25 per cent less personnel is required to open the tables. A special feature has been added to the operating software developed by the system's creator, Gaming Partners International, to signal any loss over £1,000 during a specific period of time.

"Tables monitoring and tracking of the chips flows are the main features of our

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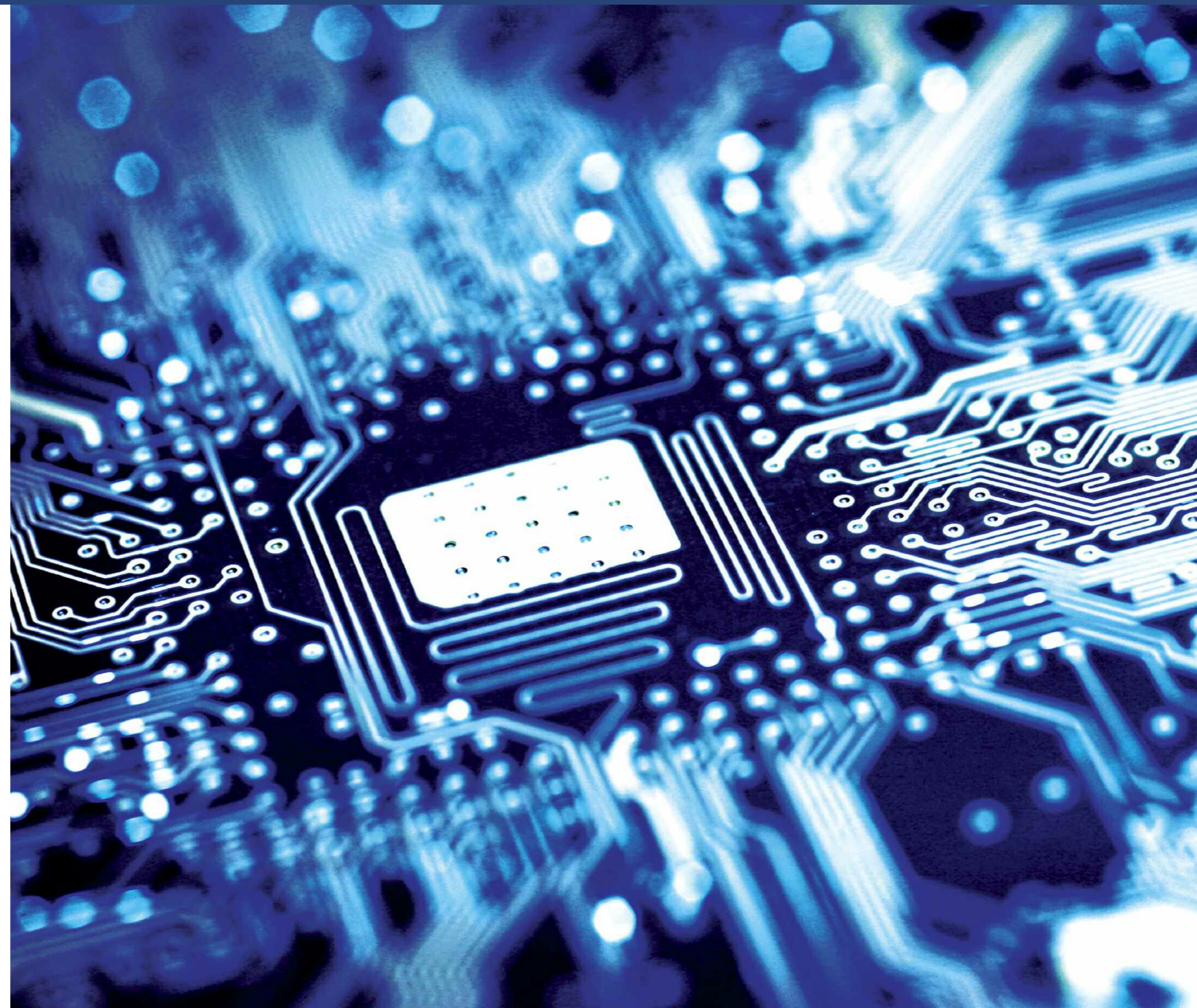
RFIDTablesSolution platform," states Christophe Leparoux, GPI International Sales and Marketing Manager. "Using our latest RFID chips technology, this is GPI's global software solution working with the most recent computer systems that allow efficient monitoring and management of the tables."

STARTING THE CLOCK

Gaming Partners International started discussions with operators in 2005, with a view to launching a raft of technological advances, one of which was a new RFID system. "We wanted to try as many new products in the field as possible," explained GPI's Lionel Cazalis. "We found a casino interested in testing a full RFID chip tracking system, with a complete set of RFID 50p to £100 chips, in addition to RFID blackjack and roulette trays and an RFID cashdesk with counter-top reader to scan its complete chip inventory," said Mr. Cazelli.

The idea behind the system was to create a security level solution that could check the authenticity of the chips on its floor, while GPI worked to create an off-the-shelf solution to promote to the wider casino marketplace. "We knew that the RFID readers worked perfectly in the laboratory, but we needed a test site to develop the software and hardware in a live environment," states Mr. Cazalis. A joint project presented an ideal opportunity, with the two companies having since worked together to perfect the solution.

LAUNCH-PAD

The launch of the casino in June 2006, saw the casino opening with a complete RFID chip inventory for its 15 tables. The test was initiated at the same time. From the outset GPI encountered location

problems, with the RFID signal failing in areas in which metal parts shielded the readers from the chips. While resolving this issue quickly, by simply removing the interference (predominately decorative metal pieces on the tables), hardware problems emerged, with conflicts with existing electronic equipment within the cabinets, with the mass of cabling required to pass information from table to table, and with a series of software issues that arose in the field. The casino staff also had to change the way that they managed the tables, as they needed to grow accustomed to keeping the trays tidy, stacking neatly and efficiently to ensures the accuracy of the system was maintained at all times.

Halfway through the test, in mid-2008, GPI instigated a major upgrade to the system, with changes to both the

hardware and software. The RFID system had lain dormant for several months while GPI redesigned its software solution from the ground up. Almost a year after installation, GPI had realised that the additional performance of new RS232/Ethernet adaptors offered tangible benefits to the system, and so decided to redesign the software in order to benefit from these new devices. "We also took the opportunity to improve man-machine interfaces and customise reports for the management," explained Mr, Cazalis. "The outcome is that we gained additional stability and the system is now very robust."

Having created the system in 2006 as a series of independent PCs connected to a central server, this one computer per table system was abandoned as part of the update in favour of a main server that addresses each table individually with a Ethernet and LAN networking solution replacing the complicated former set-up. Exploring beneath the tables, the kit is now surprisingly simple. A reader and power unit tidily sit beneath the tabletop, connected to a central system in back of house that's proved to be much more reliable than the previous set-up in which each table incorporated its own PC to drive the technology.

Ultimately, the casino decided to remove its RFID cashdesk reader, in response to space limitations of its cashdesk. The size of the cashdesk meant that there was only one RFID reader available for two positions, which inevitably slowed operation during busy periods. The casino, therefore, chose to use the system solely for the purposes of chip tracking, to process chip difference utilising a full RFID system database.

RIGHT SIZE SOLUTION

The creation of a robust RFID chip-tracking solution has undoubtedly proved a complicated venture. The ability to read/scan chips and stacks with a value chip cover up to 800 chips, especially for casino applications, has been a major undertaking. The RFID readers previously on the market had been mass-produced to track cattle and for stock-keeping purposes. The upshot of all this is that there's no off-the-shelf RFID solution that can be simply adapted for the casino sector. GPI has had to create a bespoke solution from existing elements, redeveloping some, creating the rest from scratch. The result has been a series of hardware and software hurdles that the company has had to clear, but finally the end is in sight.

CHECKS AND MEASURE

Speaking to the casino Pit Boss, the GPI

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RFID solution has had a very positive impact, enabling staff at the casino to eradicate the paper system used to record table floats and fills. "The GPI system reads discrepancies in the floats, counts the fill, and enables me to bring up a report live on any table on the system," he stated. "The system, as a result, saves time, increases the amount of information available to us about the tables at any time, and allows us to open and close tables instantaneously."

As a technological solution, the system has been a hit at the location. Open 24 hours, the casino has dispensed with manual fills, credits, drop and balance records. "In a large casino, such as this one, the time saving is the biggest factor in the system's favour," stated the Pit Boss. "We're also taking any input errors out of the equation and generating a series of real-time reports that help with the operation of the casino. It's a great system and a great idea."

LOCATION, LOCATION, LOCATION

Proving a fantastic test environment for the new system, the casino staff have embraced the technology and worked with GPI to hone and refine each element of the system. As a result, there's a definite pride and a sense of ownership over the success of the system among staff. Each knows the system intimately, and because it directly saves them time and a series of monotonous tasks, there's a genuine feeling of investment in the technology by the team. "Our IT department has worked hand-in-hand with GPI to ensure that the system is robust at every level, and is able to provide true time and cost saving benefits for the casino," stated the Pit Boss.

"The management at the casino have also been very enthusiastic supporters of the system," confirms Mr. Cazalis. "They convinced the dealers and the pit-bosses of the benefits of the system, in particular, the opening and closing speed of the tables, removing the need to manually count the chips and log all this information by hand with a paper system. This is now done electronically at the push of a button."

TOP TIER THINKING

The casino's General Manager has proved a real catalyst in the development of the technology. "I saw it as my job to ensure the system worked, as I believed it presented a real opportunity for the casino if it could deliver on its potential," he states. "It's undoubtedly been a lengthy process, but the system has continued to improve into a fully operating RFID solution."

As a 24 hour operation, the ability to turn a table on or off, without having to delay the operation or waste time closing down a table, has tangible benefits to the business, both in terms of man-hours saved and the faster service offered to the customer. "We continue to have some accuracy issues, but most of the early problems were resolved by simple procedures relating to how we managed our tables, stack our chips etc.," states the GM. "Once we measure how long it takes us to open and close a table, in terms of the extra spins and deals per hour, then we'll be able to put a figure to the real savings we are making with the

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> **Test Casino GM.**

system. In the meantime, right now we're reaping the rewards of the efforts of our staff and dedication of GPI in the development of the solution."

"When I took over the casino, the solution was undergoing a series of system upgrades," he explains. "I could clearly see the advantages of removing the paper-based system we had relied upon in the past, but there were several issues still to be ironed out. However, the enthusiasm of the staff to use the system has certainly helped as we've benefited from a reduction in human-error and a positive customer service gain."
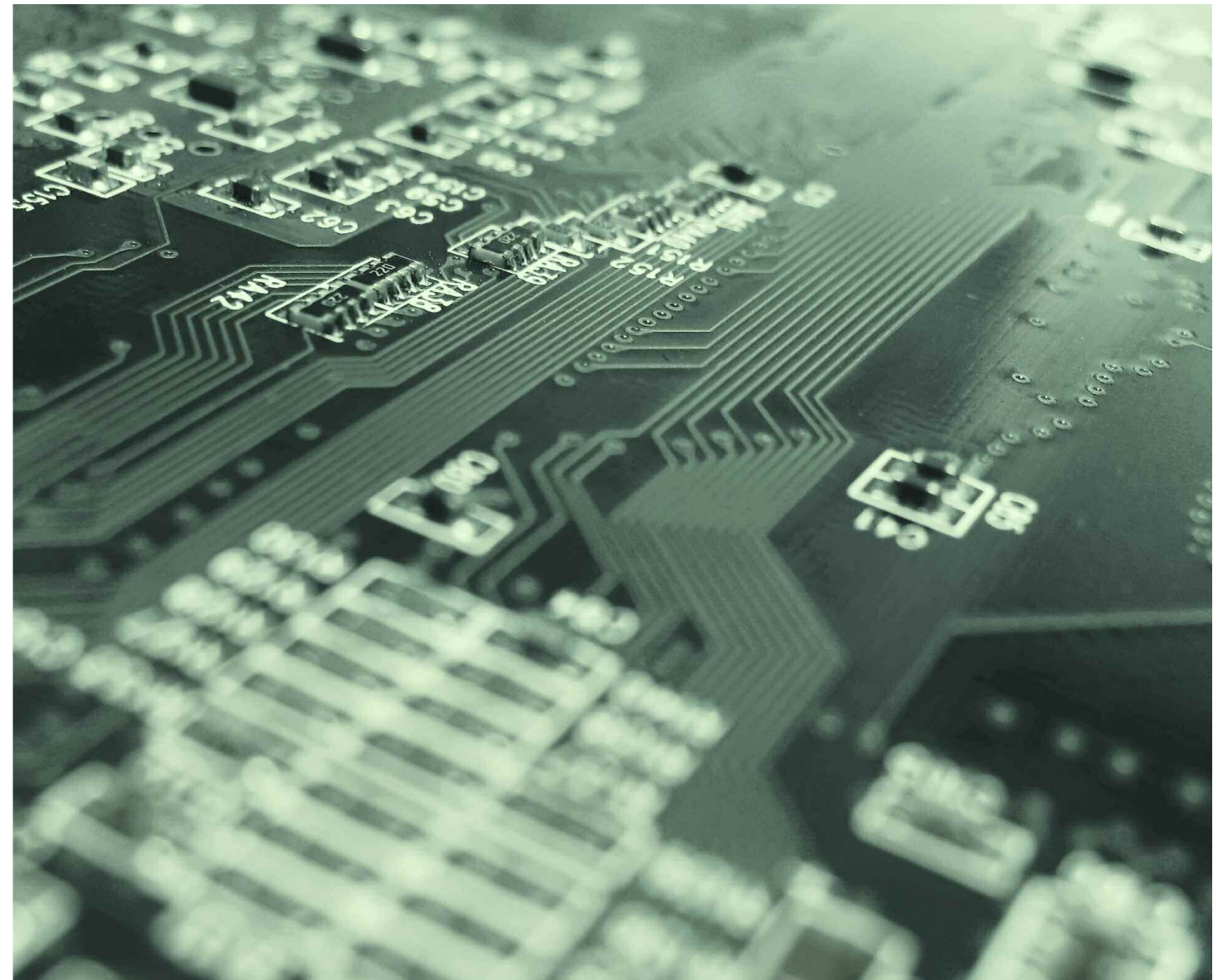
In terms of working with the system on a daily, 24 hour basis, the general manager is more than happy to continue with the GPI solution. "We have seen a great difference in time-saved, with more hands and more spins as a direct result of using the solution," commented the GM. "We are now also able to open and close a table at the touch of a button, which has changed the way we operate table games in the casino. As a tangible customer benefit, I think that the system remains invisible to the player, but in regards to customer-facing time, we're able respond quicker, ultimately giving them a better service."

The ability to draw live information from the tables; to instantly see the performance in real-time, not just of the floor, but of each individual table at any given time, is proving an important tool in driving profitability and in understanding the statistics of table gaming.

REAL-TIME SERVICE

"Working with Gaming Partners Internaitonal has been a pleasure," declared the GM. "They have been very responsive and flexible in terms of changing, updating and ensuring that the product has met our expectations. We're very happy to have been a test-bed for this product, believing that our casino should be at the forefront of technological development with the aim of providing our customers with the greatest possible service and player experience.

"Having said that, we're not looking to operate the Starship Enterprise, and I think that every new solution must add real value to the business. We must deliver customer service and value in every aspect of the offer. As part of that ethos, the GPI solution works to support our excellent staff and progressive entertainment offer to provide an appealing destination for our customers."

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"We've only been operating the system fully for two months," he states. "We're still within the testing period right now. However, in three to six months, when we reach that 100 per cent operating efficiency, I would have no problem recommending this system to other operators in the industry."

Currently, GPI is discussing the solution with a number of groups. GPI is already pushing ahead with its second installation in Argentina, with a 10-15 table system utilising low frequency chips. "We have installed in France, the most recent in one of the casinos in the Alps, in which we've installed three RFID poker tables to scan the rake automatically, enabling more hands to be dealt and more games to be played," said Mr. Cazalis. While the recession is affecting uptake at the present moment in time, the cost efficiencies provided by the system is creating genuine interest at all levels.