

TABLE GAMES IN THE YEAR 2020

By Bill Zender

It was around 3:30 a.m. when Charlie's phone beeped, informing him that he had a message from the gaming security system. As the VP of gaming operations, Charlie had to maintain constant contact with the operation. The system software algorithm had detected a possibility that someone was counting cards in blackjack. Charlie got out of bed and opened his netbook. Once his thumb print automatically logged him into the security system, he checked the wagering metrics of the suspected player. Even though the entire table games department was now based on digital electronic tables, several of the games were set along the parameters of the older paper-playing card reality blackjack games, and could still be vulnerable to card counting. Based on the indicated average bet and the customers limited bet spread, the system indicated that the player was not a long-term threat to the casino. Charlie shut down the netbook and went back to bed. He could always research this situation further in the morning.

By 8:30 a.m., Charlie parked his car in the employee's parking lot and checked his smart phone. Through his phone, he was in continual contact with his casino. The year is 2020. Charlie is the vice president of gaming operations at one of the new Midwestern casinos. His casino has become the first casino in the world to go 100 percent digital on their live card games and roulette tables. Casino games such as blackjack, roulette, baccarat and the recently popular alternative games have abandoned the felt layouts, vinyl chips, paper cards, Teflon roulette balls for HD monitors, computer virtual reality software, LED signage and electronic imagery.

Live Table Games Go Digital

The digital games were just that—all digital. Even though the system required a flesh and blood dealer on the table, all the dealing functions were handled by the table. The cards were virtual, images that fluttered and stopped on the HD video screens position on top of the table in front of each player. The virtual cards were shuffled by the random number generator, eliminating the need for either a manual or machine shuffle. Full card randomness could be obtained in a blink of an eye regardless of the number of decks programmed for use. Pre-programmed game rules and deck penetration points were handled automatically by a central computer. This degree of game flexibility affects the physical aspects of the game as well.

Table limits and side bets are automatically changed based on occupancy and wagering. Charlie had a unique table management option programmed into his blackjack game characteristics. When the

casino is busy, a number of the tables change from six wagering spots to seven. Because of the virtual aspect, some of the game's table tops consist of one large and continuous screen. During slow or regular business levels, the table projects six wagering positions, but as the evening gets busier, several of his games roll into seven spots. Of course, the number of chairs at the table doesn't change, but the seventh spot allows the casino to accommodate extra wagering. Once the business levels drop, the tables revert back to six spot games. On his lower limit blackjack games, he also has the ability to offer two side bet options. One option is based on a high hit frequency, but low multiple pay awards, while the second option has a low hit frequency, but is linked to a progressive jackpot. Table game customers now have the option to wager on an added gambling alternative that provides them with additional game action, or a trip-altering experience of the chance to hit a larger jackpot. Some players choose to do both. In the future, Charlie intends to look into a software product that allows the player to choose his own side bet from a host of options which can be selected from a pop-up menu. That way they can pick their favorite side bet, or alternate to different side bets as their tastes for gaming dictates. Charlie knows that the proper use and selection of possible side bets enhances the customers' gambling experience while increasing the casinos' alternative revenue flow.

Things have changed in live gaming, and the biggest impact has occurred concerning the game staffing. The dealer's function no longer involves handling playing cards and casino chips. Their primary function is to entertain the customers while controlling the game's decision operation. Once all players place their virtual wagers, the dealer activates the table's computer to start delivering the cards. The cards appear in order on the video screens in front of the players as well as a larger main monitor facing the dealer. As each player at the table acts on his or her hand, the dealer instructs the computer that the player was standing, hitting, doubling, splitting, surrendering; or while dealers on the alternative games direct whether the players stay in the game or dropping out of the hand. Once the players have finished acting on their hands, the table computer finishes out the dealer's portion of the table action, and immediately rolls into the take-pay-push phases. The monitors before each player will flash the outcome, "win," "push" or "bet again," signaling to the dealer which action to take. Instantly, the computer will adjust each person's table bankroll by the amount of the result and prepare the table for the next round of action.

The digital game shows a customer's wages with virtual chips

projected on to the monitor screens in front of each player position. The player has to simply touch the illustrated stack of chip denominations for the number of chips he wishes to wager, and then touch the betting circle to place a bet. He is able to do the same thing for double downs, insurance, split hands and surrender in blackjack, and to place call and bonus bets on the alternative games. On roulette, once players touch their chips stack; all they have to do is touch any area of the layout to place chips on the inside and outside layout wagers. The more times the player touches the point of the layout on the LED screen, the more chips he wagers. Software in the table's computer system automatically read the prints of his index finger when he initially touches his virtual chip stacks, and wherever his index finger touched the layout screen, the computer reads his fingerprint and places his color chip on that wager.

Players no longer buy-in with cash at the table. Each player acquires or reuses their "smart" player card. Money is transferred onto their smart card at the casino's cashier cage either through a direct download from their bank debit account or through a cash purchase. In addition to using the cashier's cage, customers can "recharge" their smart cards at a number of kiosks located on the casino floor. Primarily, the customers download funds to their cards directly from the debit accounts, and at the end of the day, if they come away winners, have the ability to upload any amount back into their account. The use of the smart card and virtual gaming funds has eliminated the need for drop boxes and casino chips. This is one of the many benefits of going virtual. It greatly decreases labor expenses while increasing gambling efficiency and casino revenue potential.

Changes in Player Tracking

The efficiency in player tracking has gone up incredibly with 100 percent digital live gaming. In the past, floor persons were required to add subjective information to the player rating metrics. Information like average bet and time on table varied greatly depending on the floor supervisor's diligence, level of personal activity and training. In most situations, manual player tracking was approximate at best, and the difference between actual and recorded information would cost a casino hundreds of thousands in player reinvestment dollars each year. Now these problems have vanished. Player tracking is now on the same par with electronic video and reel machines. Integration between live games and electronic slots is seamless, and the information gathering is real-time. In addition, the information gleaned from the increased accuracy is opening new frontiers in marketing's efforts in data mining. Marketing is now able to pinpoint trends and metric correlations that they have been unable to do in the past.

Another area that has reaped serious benefits from going digital is instant awards systems. Now the casino is able to offer automated "hot seat" and "lucky table" awards at random times, just as the slot market has been able to do for the past couple of decades. Now the casino can attract table games players by offering them a chance to win jackpot amounts while they are actively engaged in gambling on the tables. This function allows management to offer periodical promotions that attract players with a greater perceived award value, while keeping the cost to a minimum payout. The success of any promotion is due to the customer's perceived value being much greater than the actual cost spent to attract them.

Charlie had the virtual games arranged in pods of eight tables each. Each pod is staffed by a "table game host." The virtual games have eliminated traditional floor supervisor functions such as correcting mistakes, approving cash buy-ins, player tracking and game protection; the pit person's job description has changed. Now the table games host is there to answer questions, make restaurant and show reservations or change airline flights. The host will still have to make an occasional judgment call regarding table game decisions, but with the virtual

format, those decisions are limited. Once known as the "pit boss," the table games host now represents a person of customer assistance, instead of the overseer of the table games.

Table Game Metrics in a Digital World

The actual supervisor of the games is the shift administrator. It's his job to monitor the system and decide necessary changes to non-automatic functions. Charlie's first stop was at the shift administrator's office. Even though he could pull up all the information he needed from his smart phone, Charlie knew he could get a more complete and quicker run down from his SA. "How did we do last night?" Charlie asked.

The SA looked at the dashboard setup on this computer screen and commented: "Our table occupancy percentage held up good last night until about 3 a.m. this morning, then we dropped from 90 percent down to 75 percent. The system readjusted the pit configuration, and once we dropped off eight tables and returned to six wagering positions and one side bet per position, we moved back up 85 percent to 90 percent."

Charlie was impressed by the occupancy percentage. The table management system adjusted for the drop in business, and bought game productivity back to an acceptable level. "How were our numbers in blackjack like last night?" Charlie questioned.

"Well, the average bet looked good. Including side bets, we average about \$31 on the main casino floor, and \$325 in the premier room. We also did well on performance averaging between 360 and 380 decisions per table per hour."

"And, our hold percentage?" Charlie asked.

"We did pretty well in that area, too. In the last 24 hours blackjack has held over 3.5 percent, with total live gaming hold percentage of almost 5 percent," stated the SA.

To Charlie, that was music to his ears. Any time blackjack, including side bets, hold better than 3 percent, it meant the side bet play must have been outstanding. Charlie remembers the day when management used to sweat the "old" hold calculations. That was when they compared money buy-in at the table with table win to determined table game hold. Not anymore; live game hold percentage was calculated per amount wagered just like electronic and video slots. Any hold exceeding 1.5 percent the average mathematic advantage of the base game of blackjack was considered good.

Charlie had one more item to check on. "How did our alleged card counter do last night?" The SA smiled, and commented, "He didn't do too badly. Probably broke about even after about three hours of play. Too bad; you don't see many of those guys any more at any betting level."

"Yeah," Charlie said. "It seems that since we automated live table games, the advantage players and card counters are just a thing of the past. Sometimes I miss the old days."



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