RAWDON CONSULTING

Director: Alexander Blaszczynski PhD

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Sonja Bauer
Crown Melbourne
8 Whiteman Street
Southbank, Victoria 3006
Australia

Dear Sonja,
RE: Update on monitoring uncarded play

Crown Melbourne has requested a brief update on research to date, investigating the use and/or feasibility of monitoring uncarded play on gaming machines and table games.

Loyalty cards are used by a proportion of customers at casino and other gambling venues. Card play enables venue operators to monitor expenditure, frequency, patterns of play, and time on device of a customer. However, this is subject to two limitations:

1. Customers can give their loyalty card to another customer to accumulate points.
2. People may gamble using cash without inserting the card within and/or across sessions.

In a recent review of loyalty card play, around 45% of EGM players reported using a Crown Casino loyalty card. Of those with a gambling problem, a higher proportion (61%) reported such use. In other jurisdictions, loyalty cards were reportedly used by approximately 11% of general gamblers[1]. Taken together, only a minority of customers at gambling venues use loyalty cards, but a majority of those users are problem gamblers. This underscores the importance of the additional efforts required to monitor uncarded play, that is, players who gamble without cards. Uncarded play imposes significant limitations on the ability of venue operators to monitor customer expenditure, gambling frequency, patterns of play, and time spent gambling.

Barriers to effective monitoring of uncarded play include:

- Venue staff are not able to determine a customer's actual expenditure over a prolonged session through observation. It is not possible for staff to calculate net or turnover expenditure across multiple customers at any point in time.

[1] Delfabbro, P., & King, D. (2021). The prevalence of loyalty program use and its association with higher risk gambling in Australia. *Journal of Gambling Addictions,* https://akjournals.com/view/journals/2006/aop/article-10.1556-2006.2020.00082/article-10.1556-2006.2020.00082.xml.

- It is not possible to calculate a customer's expenditure over multiple sessions of play across multiple days, as there is no ability to record net or turnover amounts.
- Customers switch between machines and table games, making it difficult for staff to monitor a customer's expenditure across such activities.
- Although staff can effectively observe and/or report a customer's duration of play within a session, they cannot effectively monitor duration of play across sessions of over several days or weeks unless that customer is well-known to staff.

Effectively monitoring uncarded play requires the implementation of a system that identifies a customer and links the customer to expenditures, frequency and duration of play over multiple sessions and devices in a central registry. In one of the few examples of uncarded player tracking, Lemke and Franklin applied for a United States Patent US 7,018,291 B 1 dated 28 March 2006 for a system to track players at a gaming table. The system involved the use of a central computer, display monitor, card reader, and input device. For uncarded players, the croupier assigns an identification number to the customer and correlate this with the physical position of the customer at the table. Currency buy-ins are recorded and stored. The display showed the expenditure of each player seated at the table according to their respective position. If the uncarded player ceased play before threshold criteria is met, the information is purged at some point from the system (either immediately or at the conclusion of each day). If the customer continues play and exceeds compliance thresholds or criteria, the croupier is prompted to request to the customer to create an account. Where an uncarded player elects to remain unidentified, the croupier records descriptive information (age, gender, identifying marks) to distinguish among uncarded players. Where regulatory compliance thresholds are exceeded (e.g., raising AML concerns), alerts can be sent to the back of house, triggering action by venue staff to approach and request identification for AML purposes or welfare checks where appropriate.

For the proposed system, limitations in monitoring would occur where customers ceased play without triggering alerts and moved to another table, and/or declined to provide identification and moved to another table. The system lacks the ability to monitor an uncarded customer declining to provide identification over multiple tables and sessions of play over time. The system appears useful for detecting currency buy-ins that trigger AML concerns.

Azouri and his colleagues[2] reported on a real-time alert application and facial recognition system developed at the Christchurch Casino in collaboration with Scientific Games and Cognitec. The system was implemented for a trial in April 2016 with expectations to have additional functionality in operation during 2019. The system was designed to allow real-time monitoring and the use of mobile technology in alerting relevant staff. The types of alerts triggered by the system extended from detecting excluded players, persons and gamblers of interest, continuous carded play on multiple EGMs, and uncarded play on a single EGM, high bets and table buy-in and continuous presence, and frequency of ATM withdraws. No technical details of the system or its operation were included in the presentation, and no data on the effectiveness of the system appeared to be readily available to the public. Presumably, similar to Konami's SYNK Vision systems, cameras are placed on each gaming machine and table game using facial recognition to link data.

Konami's SYNK Vision system utilizes facial recognition to link customers with their existing loyalty card account or to associate an uncarded player with their own 'anonymous' player loyalty account based on facial recognition. This allows "…permissioned administrators the ability to automatically

[2] Azouri et al., (2018). *Servizio real-time alerts and application and Cognitec facial recognition.* Paper presented to the European Association for Gambling Studies.
https://www.easg.org/easg/assets/File/EASG_2018/Tony_Azouri.pdf

track, reach, analyze, and reward every guest that plays at the property"[3]. The SYNK Vision system is integrated with Konami's SYNKROS casino management system. For uncarded play, facial recognition technology allows for detecting and monitoring an uncarded customer's play over different machines, table games and sessions with the capacity for AI algorithms to be used to alert triggers when pre-set thresholds are exceeded. In addition, uncarded players who attract attention due to their expenditure or pattern of play are required to be approached by gaming floor staff for identification (for AML purposes) and/or welfare checks of indicators of problem gambling.

Although there is some scant literature on the use of loyalty cards (see Wohl, 2018[4]), there is very little carried out on the capacity of venue operators to monitor uncarded play among customers. A search of the library database in PsychInfo using gambling and carded, uncarded and non-loyalty card use revealed no hits. The majority of extant studies are directed to AI and algorithms used to detect problem gambling among online account holders and loyalty card players, or the relationship between use of loyalty cards and gambling related harms.

Although compliance thresholds can be set to detect potential money laundering activity, establishing criteria to trigger problem gamblers among uncarded customers remains complex. An effective system of monitoring uncarded play requires several elements:

- Facial recognition technology is capable of recording a customer's time and money expenditure but requires the capacity to link machine data to facial recognition over multiple machines within and across sessions.
- Metrics need to be established to trigger alerts. These would include but not limited to:
    - Duration of time playing a single, or multiple machines, within a session
    - Multiple ATM withdrawals
    - Frequency of play and intensity of expenditure

Problems in detection will still remain where an uncarded customer's expenditure is relatively low compared to the median or aggregate average expenditure per session but high relative to their income (pension, unemployed, or low income employment). In these circumstances, alerts are less likely to be triggered. Accordingly, it must be accepted that a proportion of customers with gambling-related problems will remain undetected during uncarded play. Staff training in detecting behavioural indicators of problem gambling must remain an adjunct to any facial recognition or other technology used to track play among uncarded customers.

Regards,

Responsible Gambling Advisory Panel

Alexander Blaszczynski
Paul Delfabbro
Lia Nower

[3] SYNK Vision: *Biometric player tracking: Cardless. Effortless. Limitless.* (undated). https://img.konami.com/gaming/catalog/syncBrochures/SYNK_Vision_Slick_High-res.pdf

[4] Michael J. A. Wohl (2018): Loyalty programmes in the gambling industry: Potentials for harm and possibilities for harm-minimization, *International Gambling Studies,* https://doi.org/10.1080/14459795.2018.1480649.