

18/10/2024

To: The Tasmanian Liquor and Gaming Commission C/O Department of Treasury and Finance GPO Box 147 HOBART TAS 7001 E: player.card.gaming@treasury.tas.gov.au	From: T Callaway and Associates Pty Limited Registered Office: [REDACTED], [REDACTED]. E: [REDACTED]
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Player Card and Cashless Gaming and how TCA aims to justify an extension of this proposal to enhance the fundamental objectives of gambling harm minimisation.

Executive Summary

TCA Pty Ltd would like to support the Tasmanian Government in its efforts to combat gambling harm and improve the solutions available for making Electronic Gaming Machines (EGMs) safer for all users. Our technology has the potential to dramatically improve the management and monitoring of EGMs to allow a safer and more controlled experience for all users.

The technology provides a unique and highly innovative approach to gambling harm minimization and control, and has already received full patents in Australia, USA and Canada.

The current “observable” methodologies that are being used require significant manual expertise and intervention and rely on players “opting in” to make the controls effective. The introduction of cashless gaming will help provide some further controls around spending limits, however even this does not address the source of the issue, which is detection and prevention. Our technology uses the same Problem Gambling Severity Index (PGSI) criteria used by many monitoring and detecting methodologies, but at a machine level, for every player using that machine, and then evaluates and assesses gambling harm criteria. Therefore, the cashless system would greatly benefit from the advanced complimentary technology it would deliver.

TCA and its associates have been developing the technology for the past 10 years. Trevor has previous experience in the electronic gaming machine industry, so has an excellent understanding of electronic gaming machines and the related gambling harm issues. The rest of his team are experts in their respective fields and include various PhD accredited associates. The project has gone through extensive reviews from AusIndustry/Department of Innovation over the past 5 years. These reviews have been by world experts in the field and the Department itself has commended TCA for its research and innovation.

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This novel technology operates in the cutting-edge fields of artificial intelligence and biometrics. There is no other technology like it in the world, as is evidenced by the Patents. Our technology will allow for safer gambling on Electronic Gaming Machines (EGMs). It rapidly detects levels of compulsive problem gambling and can provide alerts and warnings to players in real time, so they are conscious of their compulsive gambling and empower them to play responsibly.

The technology also has the capability to control defined functionality of EGMs with the ability to detect varying levels of gambling, which are determined using the PGSI, our technology will have the ability to help control all levels of gambling harm and when combined with existing and proposed solutions, such as cashless gaming, will prove an invaluable tool for the future of gaming.

Artificial Intelligence technologies are rapidly developing and becoming more available in many industries, however, the technology has achieved its proof of concept, and fundamental functionality is currently available, although it will require some performance enhancements. There will also be substantial training required at “live” venues to achieve its initial predictability levels for detecting and controlling gambling harm, however, the AI in the technology will continually evolve and keep up with the changes in regulatory requirements and EGM advancements.

As this is a patented technology, and is protected from similar technologies entering the market, the technology could be used as the building block for managing harm minimization and further research and development would see it achieve enhanced capabilities, which provides governments with confidence that it has long term viability. The credibility of the research approved by AusIndustry proves that the technology has the foundation to make a major impact on the way gambling harm is managed now and into the future and with further development the technology also has the potential to assist with money laundering controls.

TCA has several industry organizations that will be prepared to partner with us to commercialize this technology. We also have several renowned experts in this field that have assisted us with the development and will continue to be of assistance with future enhancements and commercialization progression. The next phase of this project will take place over the next 6-12 months and will aim to deliver validated technology that could be trialled in a select number of venues. This phase will include trials within the NSW Regulatory Sandbox.

Our technology monitors biometric factors, game playing patterns and game outcomes, and can rapidly detect the level of compulsive problem gaming. The device is integrated into each EGM. Every player must operate a biometric sensor, such as a wristband or joystick or similar to enable the device’s AI to function. As the device can rapidly discern problem gambling pathology, there is no need for users to register personal details on the system for it to work.



The complex array of biometric and playing data is processed by advanced patented intelligent artificial neurological processing systems. The system is calibrated against diagnosed and screened problem gamblers using the Problem Gambling Severity Index (PGSI), then the system is trained in a manner to enable the achievement of real time dynamic results that discern the level of problem gambling pathology. The training programme is a one-off phase managed through the trials stage but may be repeatedly calibrated as an ongoing enhancement to the accuracy of the system.

TCA technology advantages and improvements over other methods:

i. Pre-commitment

There is no requirement for a Player to register details or use pre-commitment formats. The technology will dynamically assess the individual biometrics and analyse these in real-time to determine a risk level and implement the defined controls determined by the relevant authority.

Could be used with existing pre-commitment guidelines through the card play/cashless system, but defined guidelines could be built into the device and would not be required at an individual level.

ii. Facial recognition

This is a very complex solution that currently only operates for registered Players. This technology could still be used in extreme cases if desired, however our technology would very quickly analyse serious problem gamblers who are not on any registered list. The system would very quickly assess these individuals and could use the in-built parameters to limit their game play or prevent them from playing at all.

iii. Marshall Monitoring

This is a very recent strategy and is very labor intensive, would require very specific training and would be very expensive. Since it is all about ratios, larger venues would require many Marshalls to effectively control the venue. Since our technology works in real time it will assess each player in real time and apply the relevant controls to that player on that EGM. Some manual monitoring could still be useful; however, it would provide a real alternative to Marshalls and they would not be necessary.

iv. \$1 Bet Limits

This is an effective strategy, however, allows no flexibility for those recreational gamblers that are not at risk. Our technology is sophisticated enough to discern recreational and non-problem gamblers, so that increased bet limits could be accessed while the system still analyses each player but would be able to reduce limits if any risk was subsequently assessed.



v. **Card-play / Cashless**

Cashless systems will be the way forward, however controls around these may vary. Our technology could be jurisdictional or make requirements uniform across jurisdictions. Very limited details would be required for the cashless system as the device technology would use its machine learning capabilities to provide accurate real time processing of each player's status. The technology could avoid many of the privacy issues associated with carded and cashless playing.

In addressing some of the issues directly covered in the Consultation Document we provide the following specific responses:

1. Our technology would integrate well with any carded system/solution or simply compliment it until a full verification and certification process was completed, whereby it could replace many of the controls provided by the carded system, but still allow the carded system to operate for individual features, such as loyalty programs.
2. The AI systems built into our technology would provide strong controls on high level problem gamblers as well as provide the ability to monitor and control lower levels of problem gambling behavior. The technology is designed to provide monitoring using the Problem Gambling Intensity Index (PGSI). This index is used to determine the level of addictiveness of individual gamblers.

This type of controlled management would automatically assess Player gambling behavior levels and determine appropriate actions according to the jurisdictional requirements. It could include progressively reducing bet limits, stop betting or alternatively, where no problem gambling risk is assessed, increase bet limits. Additional messages could be displayed for gambling help and improved gambling awareness.

3. The advantage of our technology is that it can be totally anonymous, as the technology has the capacity, over time, to build profiles for many levels of gambling behavior. So regardless of carded play or not these behavioral profiles can be assessed dynamically in real time and appropriate measures implemented on each EGM.

It also means additional monitoring mechanisms, such as player statements etc. could provide far more benefits as it could detail the number of "triggers" activated while "in play" and help build awareness of potential gambling issues. These additional measures could prove valuable for many "At risk" gamblers.



4. From a Harm minimization perspective our technology monitors and controls addictive behaviors, it provides real time analysis to the Player, and if they fail to take appropriate precautions the device will intervene and manage player betting to limit or stop losses. As mentioned, due to the Advanced technology it wouldn't matter how many different machines or venues problem gamblers use to avoid these controls, the technology would still rapidly assess their gambling behavior and implement appropriate controls. This would prove to be a major feature that would help eliminate many of the manual monitoring methods.

As previously noted the technology will provide an alternative to pre-commitment and Gambling Marshalls and allow for flexible betting alternatives.

In Summary the technology has the potential to provide a low maintenance, cost effective, real-time solution for gambling harm on EGMs. It would complement any existing or proposed system and work well within a carded play solution; however, it has the potential to exceed any existing harm minimization mechanisms.

The technology will have the ability to:

- Work with any existing solution
- Set low bet limits on all EGMs by default
- Access higher bet limits only when using the technology
- Automatically detect compulsive gambling in real time and controls gambling intensity
- Provide stronger controls - the more compulsive the gambling, the stronger the control
- Only impact problem gamblers – would not impact recreational and high roller gamblers
- Maintain privacy of individuals
- Potentially reduce the impact on revenues for venues with the option of controlled higher bet limits.
- Eliminate the need for Gambling Marshalls

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