



SUBMISSION TO THE IGA INQUIRY INTO SMARTCARD TECHNOLOGY

Note: The indicative costs (i.e. Cost to Stakeholders the South Australian Gaming Industry) included in this document are estimates based on Aristocrat's experience. However they should be regarded as indicative only as they are based upon estimation without the benefit of project scoping or industry wide consultation.

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1. Introduction:

Aristocrat as the leading supplier of electronic gaming machines and gaming systems submits the details contained in this document as formal indication of its objective consideration of the request for information with respect to the use of Smartcard Technology as a potential support tool for harm minimisation relative to the use of electronic gaming machines to the Independent Gaming Authority of South Australia.

In making a presentation to the open enquiry convened by the IGA in Adelaide on 15 February 2005, Aristocrat made a number of comments that are reiterated and expanded upon in this document.

2. Background to Aristocrat's Presentation:

Aristocrat as the longest established gaming product manufacturer and vendor in Australia has extensive experience in working with all sections of the industry including regulatory bodies and operators. Therefore Aristocrat contends that its experience, product range and presence qualifies it to contribute to supplying input to the debate on Smartcard Technology with respect to gaming with specific reference to the overall impact of introducing it across the South Australian gaming industry.

3. Wide Impact:

Aristocrat did mention that the cost of introducing Smartcard Technology will carry over into EGMs and peripheral equipment and have monetary impact upon the gaming operators.

4. Key Comments in Aristocrat's Presentation on 15 February 2005:

Aristocrat's presentation to the open forum on the 15 February made a number of comments aimed at clarifying Aristocrat's position relative to the use of Smartcards as part of a pre-commitment facility for players. On one hand Aristocrat observed that pre-commitment might have potential benefits for players whilst on the other Aristocrat observed that there is no body of evidence to support the assumptions on the value of pre-commitment to addressing problem gambling.

5. Entrance Terminals:

Aristocrat's presentation centred on entrance control and voluntary pre-commitment with the premise being that players use identification at an entrance terminal to gain admittance to the gaming venue and that secondly they could choose to pre-commit to dollar or time based limits. Upon reaching those limits the system could advise the player of having reached those pre-committed limits or remove their ability to play on.

6. Key Points in Aristocrat's Presentation of 15 February 2005:

The presentation required by the IGA required Technology Vendors to indicate what experience they had with Smartcard Technology or other technology to which Aristocrat made the following comments:

- Aristocrat is familiar with Smartcard Technology, having developed several monitoring systems inclusive of that technology in Australia that are currently operating in South African casinos. Aristocrat's System 6000g operating in various South African Provinces includes Smartcard Technology for player identification at gaming equipment.

- Aristocrat is familiar with loss limits for play, having developed and installed monitoring systems inclusive of that functionality. Aristocrat's OASIS system operating in the state of Missouri in the USA has inherent functionality that limits a player's spend per session to a fixed dollar amount. A session being the duration for a riverboat 'cruise' and the dollar being set at \$500.
- Therefore although Aristocrat has not combined Smartcard Technology with loss limit functionality Aristocrat is nonetheless qualified to comment on the technical aspects of Smartcard Technology and that it has various elements of the type of system envisaged to deliver pre-commitment in any of the forms discussed at the open forum on the 15 February 2005.
- Aristocrat develops and sells a suite of gaming systems to service various business needs of the local and international gaming industry and if judged by the number of EGMs monitored Aristocrat is arguably the largest producer of gaming systems in the world.
- Aristocrat commented that a move to include a South Australia wide ability to enrol and manage player behaviour in conjunction with Smartcard Technology relative to Smartcard Technology might require considerable change to elements of the current EGMs and the central monitoring system including interface components and communication protocols.
- Whilst some existing EGMs and possibly parts of the existing monitoring system might be upgradeable to include support for Smartcard Technology many will need to be replaced.
- Aristocrat has provided cost estimates in this document.

7. Potential benefits of Pre-commitment:

Aristocrat suggested that if made available as a voluntary option for players and therefore not imposed upon players that pre-commitment might prove to be a valuable harm minimisation measure for players and operators. However as there has been very little research into the benefits of using pre-commitment based on card use and that comment on the positive value of such measures is regarded as speculative.

- Pre-commitment if available to players might provide them an ability to limit how much they spend on gaming or alternatively how long they spend gaming.
- Pre-commitment might also enable players to set period limits such as for weekly or monthly spends
- Pre-commitment might also enable players to access details of the gaming in statements.
- Pre-commitment might also enable venue operators to identify players that are presenting with symptoms of being problem gamblers.

8. Probable Failure of Forcing Players into Pre-commitment:

Australians have an aversion to measures that impose restrictions upon their freedom of choice or have potential to impact their sense of privacy.

- Examples in support of the above comment are easy to find with rejection of an Australia card being the most easily identified rejection.

- Unsubstantiated anecdotal comment suggests that real problem gamblers seek to remain anonymous and likely to go to great lengths to hide their identity or even use aliases or adopt identities to conceal who they are.
- Imposing mandatory identification on players may very well result in problem gamblers moving into less regulated areas of gambling without providing a harm minimisation measure in gaming.

9. Positive methods of identifying players:

Aristocrat suggest that bio-metric methods of identifying players is rapidly becoming accepted as a technical means to overcome inabilities to identify individuals by other methods that are easily cheated.

- Aristocrat also comment that use of bio-metrics in aspects of gaming might be subject to patent (ref IGT US Patent #US2002155887 AA – Universal player tracking system), and use of such devices might be in breach of patent or accessible for a royalty fee.
- Aristocrat commented that checking players against listed known barred persons is a positive way of harm minimisation in gaming to protect players that have entered into self barring.

10. Brief overview of a pre-commitment system:

Aristocrat provided a brief overview of elements that might be included in a gaming venue system from entrance terminal to in machine interfaces through to a central host server.

11. Items Affected by introduction of Smartcard Technology:

- A pre-cursor to the project would be to have the South Australian (Australian) Gaming Regulations and Guidelines amended to include Smartcard functionality.

12. Authority to manage the introduction of Smartcard Technical solution:

- A second precursor to the project would be to have a single authority assigned for planning and managing the overall project across all affected entities from gaming equipment providers to venues and the system administrators for the Smartcard Technical solution.
- That authority would be assisted by appointing a single Project Manager to co-ordinate the activities necessary to ensure a smooth transition from the existing gaming equipment and systems and affected procedures to an infrastructure inclusive of Smartcard Technology.

13. Administration of the end to end system:

Who would run and administer the Statewide Smartcard Technology solution would need to be negotiated between the authority and the affected parties. Given the difference in operation of the casino from that of the hotels and clubs it might be that a level of independence would need to be retained.

- Currently the Sky Adelaide casino has and runs its own independent CMS (Casino Management System) inclusive of functionality to provide a level of wide area connection to other properties in the Sky City Entertainment Group.

- Currently the IGC (Independent Gaming Corporation Ltd) an unlisted public company owned by the Australian Hotels' Association (SA Branch) and Licensed Clubs' Association of South Australia, has and runs a Statewide CMS (Central Monitoring System) on behalf of South Australian hotels and clubs.

14. Concept, feasibility study, strategy and executive overview:

- Assigning accountability and authority to a steering committee charged with responsibility for delivering a Smartcard Technology solution would need to include a number of steps from proof of concept to business case.

15. Defining Market Requirements Specifications:

Before a formal estimate can be assembled there is a need to define all elements of the project(s) required to deliver a complete Smartcard based solution.

- A pre-cursor to such a project would be to gather finite details of the existing EGMs, systems and operating procedures to ensure that all elements are being addressed.
- Most likely specific elements are well defined and known to the persons or industry groups that have direct responsibility for them. It would therefore require their participation or contribution to defining specification for the replacement elements.

16. Defining Technical response to Market Requirements:

- A corollary of market need is to develop the technical solution definition inclusive of all aspects from systems architecture and topology to migration plans and tools for data and physical connections.
- Interpreting the amended South Australian Gaming Regulations by all affected Gaming Equipment providers will be best facilitated by having the authority's assigned project manager conduct interpretation and integration meetings attended by all affected parties.

17. Developing Technical Solutions to Market Requirements:

- Aristocrat doubts that the system currently operated in South Africa by the IGC would be possible of providing rapid access to a centralised database of player profiles needed to facilitate identification of players at EGMs and to further track and react to session play metrics. Without major rework that system would need to be replaced or augmented by a discrete system.
- The engineering work required to provide the end to end technical solution inclusive of the ability to register players onto the system database and issue them with a unique Smartcard additional to system functionality that enables the player to pre-commit to restrictions on either dollar spend or duration and ability in EGMs to read the Smartcard and react to any pre-commitment metrics.
- System simulators and emulators would need to be available to the various gaming equipment providers to assist them in developing and testing their individual products.

18. Testing Solution to Market Requirements:

Given the mix of gaming products in the South Australian market and provided the authority agreed as part of the roll out for a Smartcard Technical solution to allow the reworking of existing EGMs to include Smartcard read and write hardware and associated interfaces then the project will require testing the solution across each of the affected existing EGM types by brand and/or model.

Similarly testing would be required across all brands and/or model of any new EGMs proposed to take part in the Smartcard Technical solution.

Testing at this level might be restricted to simulation of the final system and venue environment.

19. ATF Testing:

The formal process of product submission and testing the end to end process including all affected gaming devices against the existing and amended South Australian Gaming Standards will require the activities of an ATF (Approved Test Facility).

- In order to test the entire suite of affected gaming products it is likely that a number of ATFs might be assigned to check elements of the end process even if that were restricted to specific brand and/or models of EGMs with responsibility for testing the system being a specific assignment.
- Whether the authority determines which ATF is assigned to what aspects of the end to end project needs to be established.
- Simulators and emulators used in developing the Smartcard Technical solution would need to be available to the ATF(s) unless full systems can be made available.

20. Testing by associated testing laboratories:

The Australian and South Australian Gaming Regulations and Guidelines impose specific technical regulations and tests for compliance with them.

- Typically the inclusion of new or modified hardware and firmware into EGMs would require that EGMs and some other gaming equipment be tested for electromagnetic emissions, recovery from power outage, etc.
- The testing of new gaming devices and/or regression testing of modified existing product will be necessary to ensure affected devices are awarded compliance certification.

21. Test Bed Trials:

Test bed integration of all elements of the Smartcard Technical solution would confirm that the solution submitted does indeed include all specified elements.

22. Approval to Field Trial:

Recommendation by the ATFs would result in the Authority granting approval to conduct field trials to confirm the test bed results and further prove that under real load the system and attached equipment meets the prevailing South Australian Gaming Regulations.

23. Field Trial Solution to Market Requirements:

Field trials conducted under the control of the authority will ensure that the end to end system inclusive of Smartcard Technology meets not only the prevailing Gaming Regulations but also meets the modified procedures for the collective and individual venues.

24. Smartcard reading devices:

Each gaming machine in South Australia would need to be equipped with hardware and firmware with an ability to read and write to Smartcards.

- That hardware and firmware might be provided in the form of EGM brand and/or model specific field retrofit kits or made available in kits for integration into new gaming machines.
- Where those kits are installed into or onto or adjacent to gaming machines and by who would need to be decided as part of the overall project plan.
- Supply source for the kits would also need to be determined within the overall project plan.

25. System functionality:

Determining the functionality and related procedures would be part of the overall project planning process.

- As mentioned elsewhere in this document the end to end process from assigning Smartcards to individual players and providing them with an ability to use them will be part of the overall project plan.
- Given the difference in environment between the Sky Adelaide Casino and the majority if not all non-casino venues it is likely that elements of systems functionality for use in the casino might vary from those in the non-casino venues.

26. Installing the Statewide system inclusive of Smartcard Technology:

Given the existing arrangements in South Australia for the provision of technical support to gaming venues consideration will need to be given in the overall project plan for who would be assigned to roll out a new or modified Statewide monitoring system.

- The non-casino support providers do not currently provide assistance to the Sky Adelaide Casino and the technicians employed by the casino do not provide assistance to the non-casino venues.
- Updating or replacing the existing monitoring system with a Statewide CMS inclusive of Smartcard Technology will require project management to handle the logistics of parts and resources across all venues and venue types.

27. Retraining of System Staff (currently the IGC):

Determining who would run and manage the Statewide monitoring system inclusive of Smartcard Technology would need to be considered in the overall project plan.

- As mentioned above there will be considerable logistics management involved to be managed under modified or new operating procedures that need to be conveyed to system operational staff.

28. Retraining of Venue Staff:

Determining who would manage the use of the Smartcard Technology at individual venues would need to be considered in the overall project plan.

- The venue process for casino and non-casino venues would be managed under modified or new operating procedures that would need to be conveyed to venue operational and technical staff.

29. Educating players:

Making players aware of the changed procedures relative to their interacting with the Statewide CMS inclusive of Smartcard Technology and then assisting them to get the best out of the system's inclusions would need to be included in the overall project plan.

30. Transition from existing Player Cards to Smartcards:

Many gaming venues in South Australia have existing membership card facilities for players.

- Typically but not universal is that many of those member cards are linked to wide area systems that enable the player to use the card assigned to them in more than one venue.
- Many of those cards have functionality that supports CMS (Customer Management) for rewarding players for making purchases of goods and services at participating retail venues that have a formal association with each other including gaming venues.
- Not all of those cards are Smartcards which means that the card readers inherent in the gaming machines and or at participating non-gaming venues would need to be upgraded to read and write to Smartcards.
- Hybrid card readers that have an ability to read encoded magnetic strip on mag stripe cards additional to abilities to read and write to Smartcards are available and could be used to replace single process devices as required. Determining the magnitude and extent of this aspect of the overall project would require considerable site surveys. Developing, producing and installing kits inclusive of the respective card readers would need to be factored into the overall project plan.
- A logistics and technical solution might be for casino players to have an additional card for use in non South Australian venues however that might be an issue relative to keeping a single pool of player points for such players.

31. Summary:

Aristocrat contends that implementing Smartcard Technology across all EGMs in South Australia will be a very costly exercise impacting upon all stakeholders. Determining who administers the Smartcard Technology solution for or on behalf of the various stakeholders will require significant consultation. As suggested throughout this document and Aristocrat's presentation to the open forum on the 15 February 2005.

Aristocrat would suggest the IGA consider a phased approach to introducing Smartcards or similar technology so as to prove the benefits of such an introduction in the most cost effective manner.

32. Estimate of cost to introduce Smartcard Technology:

Aristocrat provides the following cost estimate as guide and actual dollar amounts will be subject to reaching a final specification and an allocation of tasks and deliverables to capable providers.

- A flat \$150 per hour has been used for the indicative only estimate on the basis that some persons in the project might be more expensive whilst others might be less expensive.
- The indicative cost included at the rear of this document is based upon experience in rolling out the NSW CMS to in excess of 100,000 EGMs in over 400 venues and with providing EGMs and Gaming Systems to numerous markets throughout the world.
- Aristocrat estimates an indicative cost in the range of \$100 to 140 million dollars (AUD) to introduce Smartcard Technology into gaming throughout South Australia, plus GST where applicable.
- The indicative cost above is based upon modifying the majority of the 12,000 EGMs likely to be in existence in South Australia in the calendar year 2006. If a majority of those EGMs were in need of replacing to facilitate the Smartcard Technology solution the indicative cost might be in the range of \$120 to \$160 million dollars (AUD), plus GST where applicable.
- Consumables such as Smartcards are not specifically mentioned here but it would be reasonable to add another \$2 million dollars (AUD) to cover the purchase of 200,000 cards to set up the solution. Replacement cards overtime would be an ongoing expense.
- The cost of employing technology for biometric identification methods would vary considerably depending upon whether they were used at entry to venues or on each EGM. A single facility per venue is likely to raise the overall indicative cost for introducing Smartcard Technology by an additional \$5 million dollars AUD, plus GST where applicable.