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**Response to the Inquiry into Smartcard Technology
By the Independent Gambling Authority of South Australia**

Response submitted by Safe Gaming System™, Inc.

March 21, 2005

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General/Preface

The Independent Gambling Authority of South Australia (the Authority) has issued a written "Inquiry into Smartcard Technology" (Inquiry), dated 25 January 2005. The purpose of the Inquiry is to support the Authority in its duty to identify how Smartcard technology may be implemented in South Australia to significantly reduce problem gambling; further, to assist the Minister for Gambling to comply with section 90 of the Gaming Machines Act of 1992.

The Inquiry document specifies guidelines and dates for interested parties to respond. This document presents the written response by the Safe Gaming System™, Inc. (SGS); a Nevada Corporation based in Las Vegas, Nevada, USA. This written response was preceded by SGS' participation in the open presentations meeting held on 15 February 2005. SGS prepared this response, addressing what it understands are the key items of interest to the Authority.

Following is an outline of the subject areas, which are addressed herein.

1. Provide a background summary describing the operation and people comprising the respondent, Safe Gaming System, Inc. (SGS).
2. What is SGS' proposal for a system that will significantly reduce problem gambling in South Australia?
3. How can Smartcard technology be utilized in the proposed system?
4. How does SGS propose to set limits on the gamblers' use of gaming machines to minimize or reduce harm?
5. How does SGS propose to manage the exclusion of particular gamblers who have either voluntarily or otherwise been excluded from access to gaming machines?
6. What is the estimated cost and timeline for installing the SGS proposal?
7. Describe the process of implementation so that the degree of difficulty may be evaluated.
8. Describe the security and administration of the system.
9. Describe the likely impact upon problem gambling.
10. Provide details about the following system features, among others.
 - a. How is pre-commitment accomplished?
 - b. How are monetary and time limits determined and administered?
 - c. How are game feature limits determined and administered?
 - d. What happens when the time and monetary pre-committed limits are reached?
 - e. What is the period of time that pre-commitment occurs for the system prior to gambling activity?
 - f. What are pre-commitment time periods, that is, weeks, months, quarters, etc.
11. State and discuss any expected issues and/or areas of concern.
12. What is the relationship and impact of the proposed system with the existing equipment, monitoring system, users, and current licensees?



Summary of SGS' Response and Recommendations

The Safe Gaming System (SGS) is recommended for implementation in South Australia (SA) as the most effective and comprehensive system available for controlling gambling. It will protect those who choose to gamble from incurring serious harm from inappropriate gambling, and will prevent them from progressively developing serious gambling problems.

The estimated time for having the complete SGS system, as described in this document, operating in SA is approximately 60 weeks from receipt of order. This includes an 18-week plan for all qualified persons to pre-register with the system.

SGS recommends a system with the features and options described in this section. SGS believes implementation of these recommendations will yield the most effective and manageable approach to substantially reduce gambling problems. However, these choices are clearly reliant upon jurisdictional policy and regulations. SGS is designed with the necessary flexibility to meet the needs of SA, regardless of whether the chosen feature set matches the following description of **SGS' recommendations**.

SGS recommends that registration to gamble be made a requirement in SA, and all registrants are issued a gambling access smartcard with biometric fingerprint verification of identity. Registrants must offer proof of age and comply with any other jurisdiction rules concerning general eligibility to gamble. All gambling machines are to be equipped with smartcard readers with a fingerprint reader accessory, capable of verifying the user's fingerprint against the electronic fingerprint image stored on the inserted smartcard. Table games at casinos may incorporate the smartcard process for verifying the eligibility of participants, and as a means to utilize funds from their SGS debit account.

There are two categories of gamblers established and authorized, and the categories are mutually exclusive. The first category is referred to as "occasional" gamblers. The second category is "conventional" gamblers.

Each eligible gambler may be a member of only one of the two authorized categories in any given time period. SGS' technical registration procedure ensures that each person is included in only one category. It also prevents people from changing categories between "occasional" and "conventional" categories in the same time period.



The idea of the “occasional” gambler category is that those who do not gamble an amount considered by the jurisdiction to be significant, do not need to engage in the full SGS process, but do need to be verified as legally qualified to gambler. To create an “occasional” category, the jurisdiction publicly specifies by regulation, the maximum amounts of time and money expended, over a given period that defines the upper limits for the “occasional” category.

Any person legally qualified to gamble may choose to register as an “occasional” gambler. Only the “occasional” category gamblers may elect to establish an account as an anonymous account. The registration for an anonymous account is very quick, taking no more than a few minutes. The account number will be the key used to monitor all accounts, including anonymous accounts; to ensure the registrant does not exceed the time and money limits. Gambling access is denied for any registrant, if and when specified limits are reached, in any given period. One may not switch categories from “occasional” to “conventional” or vice versa, in the same time period.

Any registrant, who intends/expects to gamble more money and/or expend more time gambling than the “occasional” limits provide, would choose the “conventional” category. For “conventional” gamblers, limits will be set based upon a calculation of a reasonable portion of the individual’s disposable income that may be made available for gambling. **Anonymous accounts are not allowed for “conventional” accounts** because the registrant must personally agree that the financial data supplied is accurate and agrees to comply with agreed limits.

A subset of the available system features is required for all registrants in the “conventional” category, so as not to breach the effectiveness of the system.

SGS recommends cashless gambling as a standard. This would allow debits and credits to a pre-committed, central account to be made on a secure basis. Eliminating handling of money and coins offers significant operational and convenience benefits to both gaming operators and their patrons. A worldwide conversion to cashless basis is progressing rapidly, and the latest gaming machine standards promote and assume cashless capability.

Coin and bill receptors, if present, would be “off” in the default or idle mode. Any coin or bill inserted while in the “off” mode will be returned. Receptors would only be turned “on” for use upon receipt of a successful “occasional” gambler log in using a smartcard with fingerprint biometrics.



The smartcard must remain in the reader during the entire gambling session. Removing the card from the reader will end the session and turn the coin receptors “off.” Using any cash out button will also end the session. Periodically, with a default of say, one hour’s time, the application will ask for a renewal of identity verification using the fingerprint reader.

If cashless gambling is allowed, as SGS recommends, that “conventional” category gamblers will be 100% cashless participants. The coin and bill receptors will not be needed and thus, not turned on for “conventional” users.

Each “conventional” gambling session is authorized in real time. That is, the gambler, once successfully logged in, will specify the amount of money and time desired, within the available, remaining money and time, that is desired to be applied to the current gambling session. The amount chosen will be credited to the gambling device on a cashless basis, and the gambler may begin play. The session limits will be enforced by the system.

When any category of gambler reaches the limits specified, a message informing the gambler of the limit will be presented on the LCD, and the gambling device will be returned to the default “off” mode. Whenever a “conventional” gambler’s session ends with credit still available, that amount will be credited back to the gambler’s SGS debit account balance.

Once per day, electronic transactions, called “settlements”, will be processed between the registrants’ accounts and the gaming venue accounts.

For the physical network, SGS proposes replacing all current venue monitoring system controllers with platforms that will support monitoring functions, and add all SGS features needed at the venue level.

SGS proposes partnering with the jurisdiction to organize “Resource Centers”, which function as support centers for gamblers. The centers will be either existing or newly created, and staffed with qualified personnel that can supply educational material, counseling, and assistance to gamblers, especially those who are experiencing problems. Searching the SGS Web site or inquiring at any equipped venue may locate Resource Centers.

One of the design premises of SGS is that the pre-committed gambling account be administered on a centralized basis. The reasons for this are that an effective gambling control system must be: 1) capable of inter-jurisdictional application and administration, and 2) be adaptable to various end-device access technologies.



Safe Gaming System, Inc. Background Summary

Provide a background summary describing the operation and people comprising the respondent, Safe Gaming System, Inc.

The Safe Gaming System (SGS) product/service was first conceived in 1999. The objective was to invent, build, and implement a means, utilizing the best available technology and psychology, to effectively minimize and/or eliminate the harm suffered by people due to inappropriate gambling.

The creation of SGS was motivated by environmental conditions, in which access to legalized gambling was beginning to accelerate, worldwide, resulting in startling increases in associated problems. There were no effective tools available to abate the growth of gambling problems. Less than 1% of the millions of people in need of assistance were receiving treatment, guidance, or help of any kind.

Presently, the problems continue to grow rapidly, and the past attempts at societal solutions to deal with the human and financial tragedies resulting from gambling problems have been extremely ineffective, by any reasonable measure. SGS is just beginning to gain exposure and become understood by legislatures and regulators on an international basis. Its implementation has the potential to completely turn around the past trends of mounting suffering.

SGS is committed to reduce the human suffering due to gambling problems, which is vast, and cannot be adequately expressed in dollars. In addition, SGS will minimize the worldwide monetary costs to society, in general, of problem gambling, which are presently estimated as hundreds of billions per year. This economic burden on society is directly attributable to the problems that manifest themselves in those engaged in sustained, inappropriate gambling. Among these problems are: bad debts, bankruptcy, white-collar crime, fraud, suicides, family break-ups/divorce, domestic violence, child neglect, incarceration, government sponsored treatment and recovery, lost productivity, unemployment, and homelessness.

Safe Gaming System, Inc. is in its early stages of corporate development, currently consisting of a small group of employees and an elite group of trusted technical contractors. The company headquarters is located at Las Vegas, Nevada, USA. The people working on SGS are located in several different states in the US and some contractors are located in Europe.

The founder and CEO of SGS, Inc. is Richard A. Johnson, P.E. Mr. Johnson is the original inventor of the system and has led the development.



Development of operational software for SGS was undertaken in late 2003, soon after a United States patent for the system was granted. As of March 2005, the first version of the software has been internally tested and the company is negotiating with a few selected candidate locations to conduct pilot tests. SGS is planning for two pilot tests to be in progress within the next 120 days.

SGS' Guiding Concepts

“Problem Gambling is, by definition, not sustainable.”

This refers to the fact that problem gamblers invariably reach a point where the damages are so severe, that something to stop the “bleeding” must be done. This experience can be positive, that is, the problem gambler may stop or curtail gambling as a result of realization of the harm and/or because of education and counseling by others. Or it can be negative, for example, bankruptcy, loss of employment, incarceration, suicide, etc. In any event, something will occur to alter the behavior of a person with serious gambling issues.

“SGS is the driver’s license, seatbelts, and airbags of gambling.”

This metaphor portrays the SGS as what it is really designed to be. SGS offers an infrastructure of safety controls that will ameliorate the damage that can be done by excessive or inappropriate gambling. It is a “driver’s license”, in that gamblers must register for the service, may take a self-administered test to assess their gambling status, set limits, and pre-commit in order to establish an SGS account to gamble in equipped venues. This is similar to the laws and regulations that require a test to assure that a prospective driver is of sufficient age, knowledgeable, and has the minimum skills to operate a motor vehicle. SGS is similar to seatbelts and airbags in that its controls restrain the user to protect against exceeding expenditure and other limits, where damage occurs.

“Don’t play where it isn’t safe.”

This is a message that encourages people to make the wise choice wherever there are venues that have no controls vs. those that implement SGS.



Proposal to Significantly Reduce Problem Gambling

What is SGS' proposal for a system that will significantly reduce problem gambling in South Australia?

The SGS is offered to South Australia (SA) as an effective and comprehensive "safety net" to protect gamblers from incurring harm by gambling, and to prevent them from progressively developing gambling problems.

SGS is an innovative, personalized means to gain and maintain control over gambling activities for all those who choose to gamble. The system is not limited to assisting any specific sub-type of gambler, such as problem gamblers, moderate-risk gamblers, etc., as its benefits accrue to all gamblers.

The philosophy behind SGS is that gambling is a recreational activity only (exception is a professional gambler). Therefore, to significantly reduce problem gambling, expenditures for gambling must be limited to a reasonable portion of one's disposable income and time that can be made available for recreation. Gambling should never be allowed to consume any portion of a gambler's income, wealth or time that will cause harm or negatively affect either the gambler's own quality of life or that of family or dependents (problem gambling). Safeguards and controls incorporated into SGS constitute a comprehensive solution to avoid the problems that result from excessive gambling losses, in terms of both money and time spent.

SGS is designed to guide its registrants to control their gambling, rather than allowing their gambling to control them.

To impart control capabilities, SGS provides both ongoing analysis of gambling behavior and protection from gambling problems. It is technology and psychology-based, with features/services to assess, educate, monitor, and assist registrants to gamble responsibly.

SGS focuses on overcoming the major reasons why people develop gambling problems, which are:

Ignorance of gambling – they don't understand odds, randomness, rules of the game, etc.

Lack of behavior control – they don't set and keep limits, give in to their impulses, lack behavioral guidance



People will register for SGS service by accessing the SGS Web site at URL <http://www.safegamingsystem.com/> and following the registration instructions. Access is available from any computer equipped for browsing the Internet, or from an authorized registration service/assistance location. The SGS site guides the registrant through making decisions about personal, affordable limits on gambling. Money and time limits for gambling are set in advance, away from the atmosphere of a gambling venue. This allows one to think more rationally and clearly and decide what personal, reasonable gambling limits should be. An SGS account is established on a centrally administered basis. Pre-purchasing gambling for "budget" periods makes pre-commitments to the account. The amount that is allowed be funded for any given period is the individual's affordable limit for gambling, or less.

Each registrant agrees that only funds in the pre-committed account may be used for gambling, and no more. Once affordable gambling expenditure limits are reached for any given period, no further funds are available for gambling until the next "budget" period. Complying with the limits, by definition, ensures that one does not develop a gambling problem, that is, incur unaffordable losses of money and time by gambling. Preventing issues is the key to continued enjoyment of recreational gambling.

Once registered, a person will be issued an SGS card, a smartcard which is used to access their pre-committed, centrally administered SGS debit account for gambling at all venues that subscribe (connect) to SGS.

Major Service Components of the Safe Gaming System

SGS offers many integrated service features that form the building blocks of the system to reduce and prevent gambling problems. Not all of the services shown in the list below need be applied in a given jurisdiction. Service modules may be changed to comply with local regulations or policy. However, a minimal subset of the features is required to ensure that effectiveness is not compromised.

- A. A personal, secure initial self-assessment of each SGS registrant for gambling sub-type and susceptibility to gambling problems.
- B. Ongoing screening for problem gambling behavior and providing referrals and guidance for assistance.
- C. Re-assessment as warranted or dictated by gambling behavior changes.
- D. Initiation and control of personal gaming parameters (including time and loss limits) employed in SGS.
- E. Pre-commitment of gaming expenditures based upon affordability.
- F. Enabling of "cashless" gaming transactions, where available.
- G. Enforcement of limits during gambling sessions at legal venues.
- H. Debiting/crediting of SGS debit account for cashless gaming activities.



- I. Inter-operability of SGS debit card with participating venues' "players' cards." Restrictions apply to ensure that players' cards are unique.
- J. Ability to register SGS-equipped venues' "players' cards" for the venues.
- K. Real-time monitoring during gambling, with gambler communication only as needed.
- L. On line educational programs and gaming tutorials.
- M. Standard and custom reports of gaming activities/behavior and SGS recommendations.
- N. Referral service for professional assistance as needed at SGS-affiliated Resource Centers.
- O. An optional winnings management program to manage winnings.
- P. Automated self /or/ legislated venue exclusion management.

Collectively, the foregoing service modules of SGS support the following general capabilities that make the system effective.

- 1) Enables Analysis – Creates and captures objective data, that is used in analyzing and determining gambling behavior patterns.
- 2) Creates an Objective Gateway to Action – Allows initiation of action to treat/exclude and assist those exhibiting problems.
- 3) Provides Protection – Avoids serious damage by enforcing limits to prevent registered gamblers from over-indulging. Initiates communication, where warranted, to assist gamblers with behavior control.
- 4) Ensures Legal Compliance – Screens for underage and excluded gamblers and enforces limitations.
- 5) Educates Gamblers – Provides assessment for gambling sub-type and evaluation of gambling risk profile. Demystifies gambling, teaches odds, technology, etc. to establish reasonable expectations of winning.



Utilization of Smartcard Technology

How can Smartcard technology be utilized in the proposed system?

SGS strongly recommends installation of a smartcard capability as a component of the SGS in SA. The smartcard would enable biometric verification of identity based upon fingerprint matching. Each registrant would possess a unique, personal smartcard. Each gaming machine would have an associated smartcard reader that incorporates a fingerprint scanner, a liquid crystal display (LCD), and an integrated keypad.

SGS recommends that all gamblers be required to register and be issued a smartcard for secure access to gambling. Two mutually exclusive categories of gamblers are recommended, i.e., each person may be a member of only one of the two authorized categories in a given time period. SGS' registration procedures ensure each person is included in only one of the two categories.

The first category is for "occasional" gamblers. The second category is for the "conventional" gamblers.

[Note: For more detail of the differences between the "occasional" and the "conventional" gambling categories, please see the section of this document entitled "Summary of SGS' Response and Recommendations."]

The process of secure identification requires that the registrant's smartcard be inserted into the reader. The user places a registered (stored representation) finger on the fingerprint reader for verification of identity. This process assures that the identity of the individual is the person who is registered for that specific account.

If the user is a "conventional" gambler, a message will ask the user to input (specify) the amount of money and time desired for the current gambling session. The amounts must be within the remaining balances of the user's account.

Coin and bill receptors, if present, would be "off" in the default or idle mode. Any coin or bill inserted while in the "off" mode will be returned. Receptors would only be turned "on" for use upon receipt of a successful "occasional" gambler log in using a smartcard with fingerprint biometrics.

The smartcard must remain in the reader during the entire gambling session. Removing the card from the reader will end the session and turn the coin receptors "off." Using any cash out button will also end the session. Periodically, with a default of say, one hour's time, the application will ask for a renewal of identity verification via the fingerprint reader.



If cashless gambling is allowed, as SGS recommends, that “conventional” category gamblers will be 100% cashless participants. The coin and bill receptors will not be needed and thus, not turned on for “conventional” users.

If the SA government decides to retain the current coins only policy, then receptors for “conventional” users are turned on upon log in and SGS will count the net gains and losses to track against the limits. When limits are reached, a message is displayed to notify the gambler, and receptors are turned off.

Each “conventional” gambling session is authorized in real time. That is, the gambler, once successfully logged in, will specify the amount of money and time desired, within the available, remaining money and time, that is desired to be applied to the current gambling session. The amount chosen will be credited to the gambling device on a cashless basis, and the gambler may begin play. The session limits will be enforced by the system.

When any category of gambler reaches the limits specified, a message informing the gambler of the limit will be presented and the gambling device will be returned to the default “off” mode. Whenever a “conventional” gambler’s session ends with credit still available, that amount will be credited back to the gambler’s SGS debit account balance.

Once per day, electronic transactions, called “settlements”, will be processed between the registrants’ accounts and the gaming venue accounts. The transactions will be handled via the SGS transaction processor.

Network Architecture

SGS provides system architecture and software for the operation of the system it offers. SGS has elected to evaluate, select, and acquire the hardware components and peripheral devices that are needed in the implementation of a system, or to have a custom hardware platform built by subcontractors.

SGS is compatible with all the various methods that may be employed to gain secure access, including the use of Smartcard technology. SGS views the use of Smartcard technology as one of best options to accomplish access to a valid registrant’s central account.

SGS proposes to provide the hardware to integrate all the needed features into a new venue-based system component (controller). SGS will provide a hardware platform, to be installed at each venue, to replace the current controller. The hardware will be used for monitoring, plus support all the new functionality to provide a full-featured SGS. The other major hardware component required at the venue is a smartcard reader, associated with each gaming machine.



The new controller platform will support monitoring, security, audit, data collection, SGS features at the venue level, smartcard server functions, SGS registration access, SGS registration verification, smartcard enrollment functions, smartcard administration functions such as canceling lost cards.

The current arrangement in SA is represented in Figure 1 and SGS' proposed and preferred new arrangement is represented in Figure 2. If SA elects to retain the current monitoring system technology, then the SGS could be installed in an arrangement illustrated in Figure 3. In the scenario represented in Figure 3, all required functions other than those done with the present monitoring system would be installed in a "bypass" mode. At a future time, when the monitoring technology is upgraded, the arrangement shown in Figure 2 could be utilized.

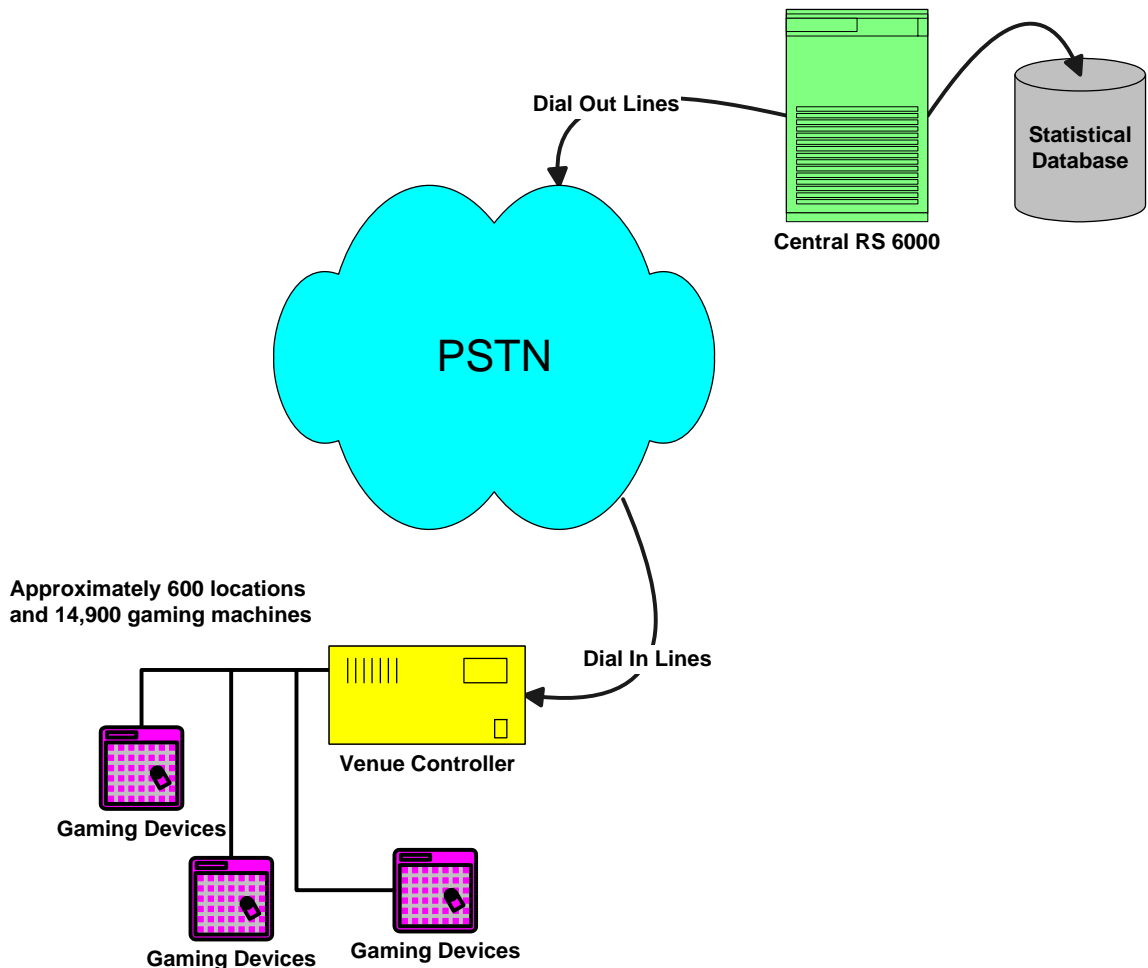


Figure 1 – Current SA Monitoring and Data Collection Arrangement

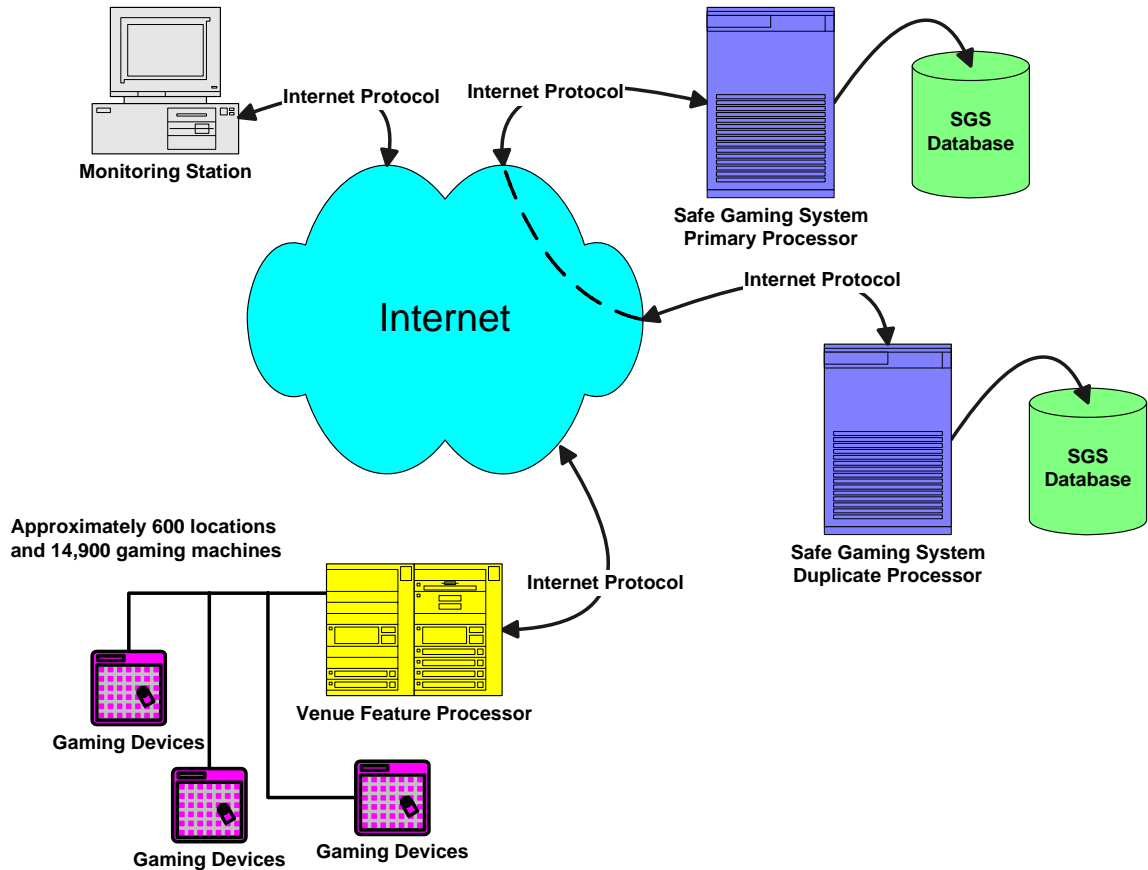


Figure 2 – Proposed/Preferred SA Combined Feature Support Arrangement

SGS will have two major Internet-accessible processing locations that are redundant and physically separated for fault tolerant operation.

[Note: For a description of the security and administration of the proposed system arrangement, please see the section of this document entitled “Security and Administration of the System.”]

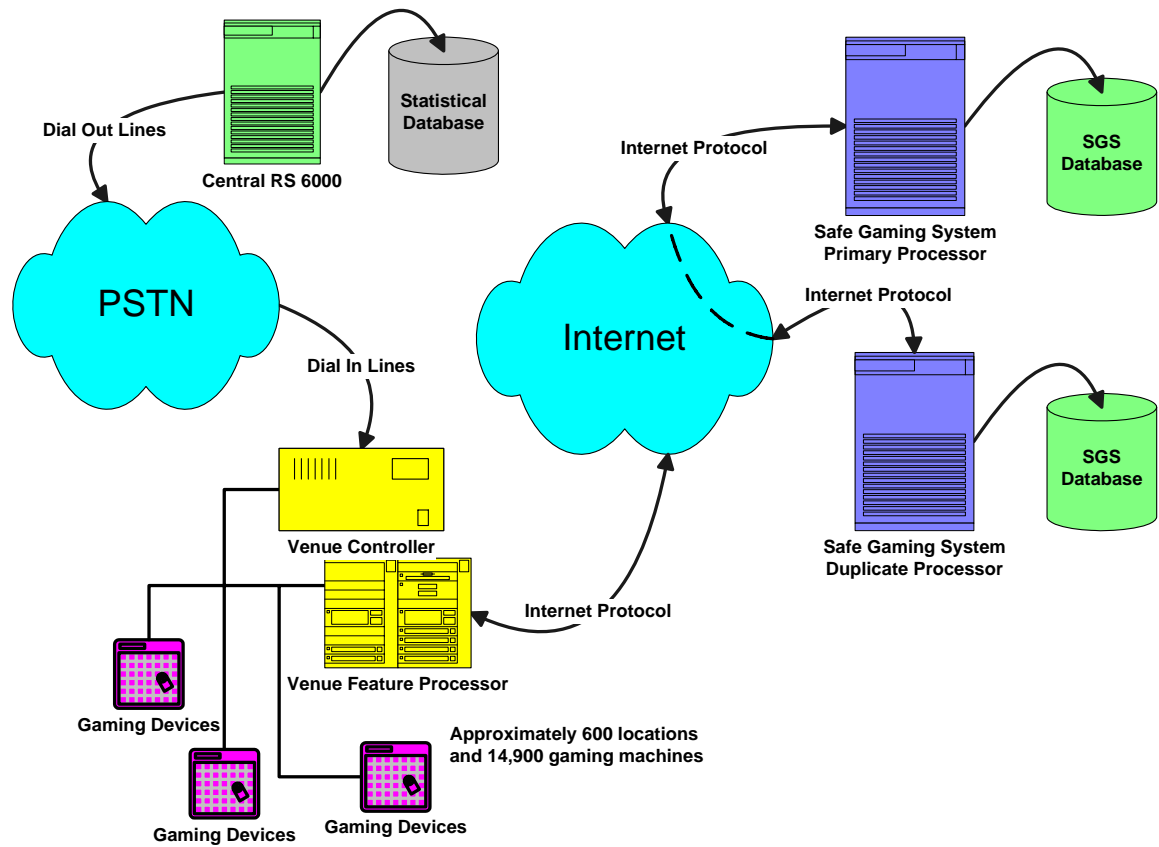


Figure 3 – Possible Arrangement If Current Monitoring Retained



Proposal to Set Limits to Reduce Harm

How does SGS propose to set limits on the gamblers' use of gaming machines to minimize or reduce harm?

SGS recommends all gamblers be registered in one of two categories, both of which have maximum limits on gambling. The first category is referred to as “occasional” gamblers. The second category is “conventional” gamblers.

Each eligible gambler may be a member of only one of the two authorized categories in any given time period. SGS' registration procedures ensure that each person is included in only one category. “Occasional” gamblers are those that do not gamble a significant amount of money, and thus are allowed to have an anonymous account, if desired, and their limits are established by regulation. “Conventional” gamblers may exceed the “insignificant” amounts but are limited to the amount calculated and agreed upon as a reasonable recreational expenditure.

The rules-based system within the SGS software contains proprietary algorithms that calculate the suggested maximum that the “conventional” registrant can afford for gambling. SGS guides the registrant through setting limits for both monetary losses and time spent gambling for a specific time period.

SGS provides online tools to the registrant to calculate a periodic budget for gambling. The amount suggested is such that, if the registrant loses that amount, there will be no significant harm done (recreational gambling). Means are provided for consideration of special, individual circumstances that may indicate a higher, or lower, limit is appropriate.

Any proposed changes in existing limits are delayed in implementation by 48 hours, as a default. Limits are enforced for the amount of time and money established and pre-committed for both the “budget period” which is either a month or a quarter as the defaults, and for each gambling session. The “conventional” gambler specifies ad hoc the amounts of his/her total to be made available for each active session.

SGS does not currently provide for, nor does it recommend, the use of game feature limits. The reason for this is that the majority of our test users have indicated that they believe game limit features to be an unnecessary restriction, given that the total expenditures for gambling are limited. Feature limits may be added for SA, if desired.



Proposal to Manage Exclusion

How does SGS propose to manage the exclusion of particular gamblers who have either voluntarily or otherwise been excluded from access to gaming machines?

SGS manages exclusions at the point of entry/access to legal gambling. Enforcement of authorized exclusions is accomplished by denying access to gambling when the excluded gambler attempts to log in via the secure access device. In addition to other authorized exclusions that may apply, self-exclusions by the registrants may be set and removed via the SGS Web site.

SGS can be utilized to manage the jurisdiction's exclusion applications directly, or accept a data from the jurisdiction to manage exclusions.

No other special notification is currently designed in SGS, other than to directly inform/remind the gambler of his/her exclusion. The registrant may view details of exclusions by accessing the MY ACCOUNT portion of the SGS Web site. If some additional notification of the attempted log in is required by regulation, this can be added to the application software.

In addition, if a radio frequency identification (RFID) chip and capability is included on the Smartcard, an optional system could be implemented to identify excluded persons upon physical entry to a gaming venue.



Timeline and Cost Estimates

What is the estimated cost and timeline for installing the SGS proposal?

The estimated time for having the complete SGS system, as described in this document operating in SA is approximately 60 weeks from receipt of order. This includes an 18-week plan for all qualified persons to pre-register with the system.

Table 1 lists only the major work items anticipated and associated time estimates for completion. This information is based upon current projections of project requirements. Once jurisdictional preferences are established, the schedule may be calculated more accurately.

Table 1 – SGS Estimated Timeline for South Australia Project

Major Work Item Number	Work Item Description	Estimated Time Interval (weeks)	Estimated Start Date (week #)	Estimated Complete Date (week #)	Depends On Item #
01	Receive order	0	0	0	
02	Assemble/test custom venue feature processor	6	2	8	01
03	Assemble/test custom smartcard reader	8	2	10	01
04	Add/test any special features ordered to SGS	12	1	13	01
05	Install/test new SGS primary processor in Australia	8	1	9	01
06	Add/test/integrate final venue features SGS software	6	8	14	02
07	Install 2 site prototype for field test	2	15	17	06
08	Conduct field test	3	17	20	07
09	Obtain approval for full installation	2	20	22	08
10	Order/deliver venue processors/smartcard readers	8	22	30	09
11	Install and test 600 sites	24	30	54	10
12	Pre-register SA gamblers	18	23	41	09
13	Train licensees, maintenance, staff personnel	28	31	59	10
14	Place entire system in service in week 60				



Table 2 lists the projected, estimated prices for the proposed system by major component. This information is based upon the recommendations made by SGS in this document, as there is no other known, proposed system model at this time. Once jurisdictional preferences are established, the pricing may be calculated more accurately.

Table 2 - SGS Estimated Prices for South Australia Project

SGS System Component	Estimated Number Units Required	Estimated Capital Cost/Unit (AU \$)	Estimated Capital Cost Total (AU \$)	Other Costs/Notes
SGS Central System	1	\$0	\$0	3/4 of 1% charged on each daily settlement transaction
Custom Venue Feature Processor	600	\$2,268	\$1,360,800	Supports all venue features including registration and enrollment.
Custom Smartcard Reader	12,100	\$347	\$4,192,650	Assumes 12,000 gaming machines operational and 5% spare units.
Project Install/Test Labor (hrs.)	4,800	\$50	\$241,920	Includes 2-person crew at 1/2 day each venue.
Venue Internet Access Lines	600			Costs not estimated due to borne by others.
Training Labor (hrs.)	1,220	\$63	\$76,860	Allocates 2 hrs. per venue plus central sites.
Smartcards e/w fingerprint biometric capability	825,000			Assumes total population of 1.5 million and approximately 55% are legal gamblers. Costs not estimated due to borne by others.



SGS Implementation Process

Describe the process of implementation so that the degree of difficulty may be evaluated.

Please refer to Table 1 for a list of the major work items planned and associated time estimates and sequence for completion. This information is based upon current projections of project requirements. Once jurisdictional preferences are established, the schedule and sequence of work may be determined more accurately.

The main project team will be based in Adelaide during implementation. The SGS staff in the US and other locations will support the on-site team. Custom arrangements of the various components will be purchased and assembled in Australia to the maximum extent practical. SGS plans to utilize Australian permanent employees and contract labor for the majority of the effort in SA.

Because the SA system recommended by SGS is unique, a prototype test will be conducted as a part of the overall project. Once all hardware and software components are tested in a laboratory environment by SGS, a field test of two SA sites is recommended prior to ordering the remainder of the equipment and beginning installations.

The SA estimated schedule incorporates reasonable time for evaluation and modification, as needed. Installation and operational testing will start 30 weeks prior to cutover. Training of licensees and other involved personnel will be done at the end of installation in their venue, and will also include an open period for people to be trained centrally approximately 8 weeks prior to cutover.



Security and Administration of the System

Describe the security and administration of the system.

SGS' infrastructure incorporates physically separate, redundant databases and hardware platforms. Failure of one network path or one central processor will not interrupt service. The primary processor is arranged to update the secondary database on a continuous basis, so that the master database is completely redundant. The IP network will be set up for "fall-over" protection. If continuity is lost between the venue device and the primary SGS processor, transactions are automatically rerouted to the backup processor and there is no break in service.

In the case of a communications failure at a venue, the venue-based features processor will be capable of supporting continuity of service for a short time until service can be restored. SGS suggests that a policy be determined for gambling access in the unlikely event of a widespread, prolonged failure. One option that is always available is to revert to stand-alone operation, wherein gambling is allowed without controls for the outage period.

The high-level administration of the SGS system is automated to a great extent and will be managed by SGS technical personnel who will always have monitoring oversight and network control capabilities.

SGS provides for, and venue licensees may be granted selected, secured administrative capabilities in order to provide a high service level to patrons. The jurisdiction may establish policy in which some of these capabilities are not needed at the venue level, and those features can be disabled.



Likely Impact Upon Problem Gambling

Describe the likely impact of the SGS upon problem gambling.

Because the SGS is comprehensive, and attacks the root issues, it is almost certainly going to be effective if implemented as intended. The role of the jurisdiction is crucial, however, as appropriate regulations are the cornerstone of the infrastructure that will make the program successful.

SGS is designed to prevent the occurrence of situations that define/create problem gambling. These are incurring unaffordable monetary losses, and spending excessive time gambling. As long as the policies and regulations adopted by the jurisdiction support the objectives and operation of the system, as designed, problem gambling in legal venues will be severely reduced. SGS believes the potential exists over time to drive problem gambling issues to nil.

Components of SGS provide tutorials to educate gamblers about how gambling really works in order to control expectations of winning, and assists them through affiliated "resource centers." Guidance is available through interactive messages when actual gambling statistics warrant intervention. Reports of gambling activity are standard, so that the registrant is made aware of the financial impact to himself/herself as a result of gambling, on an ongoing basis.



Details of System Features

Provide details about the following system features, among others.

- a. How is pre-commitment accomplished?*
- b. How are monetary and time limits determined and administered?*
- c. How are game feature limits determined and administered?*
- d. What happens when the time and monetary pre-committed limits are reached?*
- e. What is the period of time that pre-commitment occurs for the system prior to gambling activity?*
- f. What pre-commitment time periods are used? That is, weeks, months, quarters, etc.*

Pre-commitment is accomplished by pre-payment for “budget” periods to a centrally administered account, held in trust by large, reputable financial institution. Transfers can be made upon demand to checking account, etc.

Monetary and lime limits are determined by:

- Guiding the calculation to derive the recreational budget recommended maximum expenditure for gambling.
- Derive a recommended limitation on time spent gambling in a given period.

No game feature limits are designed into SGS at this time. The reason for this is that the majority of test users indicated that they believe game limit features to be an unnecessary restriction, given that the total expenditures for gambling are limited. Game feature limits may be added for SA, if desired.

When limits are reached, a message is conveyed to the gambler, and further gambling is not accessible. For cashless gambling, the machine will receive no further credit. If gambling with cash, the coin and bill receptors will remain “off” for any account that has reached limits for the period.

48 hours is default lag time for any limit changes, either up or down.

Standard pre-commitment periods (that is, budget periods for limits) currently included in SGS are months and quarters. Any other periods desired can be added.



Issues and Areas of Concern

State and discuss any expected issues and/or areas of concern.

Because SGS is software-based and designed with modularity and flexibility, it can be configured to comply with various jurisdictional requirements. However, registration requirements and secure access methods must be implemented to prevent circumvention of the key elements of limits, pre-commitment, and tracking. The policies and regulations adopted by the jurisdiction that will determine the ultimate effectiveness and efficiency of the system, include but are not limited to the following.

- Voluntary vs. mandatory registration
- Cashless vs. coins, bills operated
- Personal id vs. anonymous account
- Front end – real time, dumb, smart, biometric?
- Centralized vs. local debit account
- Potential fraud, loss of card
- Legal access/protection of data

The existing SA monitoring system is older technology. More functionality is needed in the venue-based controller software to support the features of the SGS. The original vendor of the E2 protocol (Scientific Games) no longer makes feature additions and/or upgrades to this legacy protocol. Therefore, at the time of enhancement of the system to add effective gambling controls, the status of the monitoring system will be a key factor.

[Note: For a description of the SGS recommendations to address this issue, please see the section of this document entitled “Network Architecture.”]



Recommendations of SGS

Some key decision points that face a jurisdiction in the implementation of SGS and the associated recommendations and preferences of SGS are shown below.

Key Decision	SGS Recommendation
Voluntary vs. mandatory registration	Registration to gamble is required, with a subset of features as standard, and other features optional. "Occasional" gamblers have a fixed limit and may opt to establish an anonymous account. Each person registers as either a "conventional" or "occasional" gambler, which are mutually exclusive.
Cashless vs. coins, bills operated	Cashless. This is secure and offers operational and convenience benefits to both gaming operators and patrons.
Personal id vs. anonymous account	Both. Restrict anonymous accounts to "occasional" gamblers who do not exceed a very conservative amount per period. Monitor all accounts whether anonymous or identified. Personal id and anonymous accounts are mutually exclusive. Discontinue gambling access to anonymous accounts that reach the fixed limit. Encourage managed SGS accounts and consider offering benefits to registrants.
Front end – real time, dumb, smart, biometric?	Smartcard with biometric verification of fingerprint. This is the most practical secure access option.
Centralized vs. local debit account	Centralized. A centralized account is necessary to be accessible from any gambling venue. Limiting accounts and pre-commitment are not effective for localized accounts.
Potential fraud, loss of card	Loss of card does not create an emergency if biometric identity verification is standard. Lost cards will be invalidated but theoretically cannot be used by a different person. The technology is designed to protect against fraudulent use.
Legal access/protection of data	The SGS database will be protected by the latest and most sophisticated security schemes. Jurisdictional laws will ultimately determine whether access to data by courts or law enforcement authorities will be possible. SGS' policy is to refuse to voluntarily release any registrant data.



System's Impact on Existing Environment

What is the relationship and impact of the proposed system with the existing equipment, monitoring system, users, and current licensees?

[Note: For a description of the SGS recommendations to address the monitoring system impact, please see the section of this document entitled "Network Architecture."]

New card readers, changes in access and gambling procedures, and technology learning curves are certainties with the introduction of gambling controls and Smartcard technology. Users and licensees will encounter substantial process changes as described below, and the changes have a financial impact.

Current licensees will experience an initial revenue fall, when loss limits are enforced and excessive gambling is eliminated. Over time, the customer base will move toward 100% recreational gamblers. That will increase revenue reliability for the licensees, by migrating the customer base away from problem gamblers.

Users will obviously be affected. Once the system is deployed, they will be gambling under the security of reasonable monetary and time limits. In addition, they will have more information, in the form of tutorial materials and reports available. Therefore, users will be more informed and will be kept aware of the effect their gambling is having on them.

Summary Benefits of SGS

SGS provides significant benefits to all stakeholders.

The gambling patrons benefit in that they are protected from developing or exacerbating problem gambling issues at little or no cost. This is both a financial and human welfare benefit to them.

The governmental jurisdictions benefit in that the SGS provides them a reasonable and complete mechanism to fulfill their obligation to their subjects to protect them from the issues that inappropriate gambling can create. SGS is an effective instrument that allows the gambling public to be warned, educated, and protected against the devastating problems that can accompany increased gambling accessibility. The savings in social costs to the jurisdiction and human costs to gamblers by implementing SGS are extremely significant.



The gaming venues that employ SGS benefit in several ways. First of all, use of SGS helps assure their future viability. With the addition of SGS, gaming operators will meet the expectations of their current critics who are lobbying for changes in favor of their patrons. Secondly, the existence of SGS should limit the venue's legal liability. When the gaming public can only lose an amount they can afford, a gaming operator has little or no means to influence a customer to lose an excessive, unaffordable amount.

Those who gamble responsibly are more likely spend more on gambling, over the long run, than problem gamblers. Problem gamblers, without exception, "hit a wall" for various reasons and must stop gambling much sooner than if they gambled in a responsible manner and over a longer period.

Adoption and support of the concept of gambling controls for patron protection will greatly enhance the reputation of the participating gaming operators with both the public and regulators.

Contact Information

For any questions or comments regarding this document or the Safe Gaming System, please use the contact information below.

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