

PRODUCTIVITY COMMISSION SUBMISSION

GAMBLING INQUIRY

INTERNET GAMBLING: “Pure” E-Commerce

INTRODUCTION

Internet Gambling continues to expanding globally. If the United States enter the market it will become prevalent. Australia can continue to prohibit or adopt managed liberalization. However, I suggest that prohibition (or in reality, the perception, thereof) is no longer an option, following the World Trade Organization’s ruling against the United States¹.

Regardless of the Australian policy decision (permit or prohibit) the decision will need to be enforced. To this end, I argue that a Federal Regulatory Agency overseeing Gambling, in some form, is inevitable.

The purpose of this submission is to stimulate discussion on:

- The implications of Internet Gambling.
- A Federal Regulatory Body for Gambling.
- The possibility to leverage Internet Gambling (prohibition or permission) to position Australia well for global E-Commerce.
- The need to start acting now.

Throughout this paper, I interchange the terms “Remote Gambling”, “Internet Gambling”, “Communications based gambling”, “Intranet Gambling”, “VPN Gambling”, “Systems Based Gambling” and “E-Gambling”. I do this intentionally, because no matter what one calls it they are fundamentally the same.

E-COMMERCE

¹ In December 2000, Congress amended the Interstate Horseracing Act (IHA) to allow pari-mutuel betting on horse races by phone or computer. But the law on its face is limited to states in the U.S. where it is legal to place and accept bets. Then in April of 2005, the World Trade Organization concluded the IHA, as amended, was a violation of global trade rules because it discriminates against offshore companies.

Internet Gambling is the ideal case study for E-commerce (goods, services, etc.) how to regulate and how to tax. Internet Gambling is “pure” E-commerce, in that the only item that is exchanged is money: No goods, and arguably no services² are provided.

If the “problems” are solved for Internet Gambling, then arguably they are solved for E-Commerce.

To this end, the regulation of gambling at a Federal level would be a logical predecessor to an E-Commerce regulatory unit. I am sure it is not lost on the governments around the world that current activity in E-Commerce is essentially “tax free”. That is, governments are not collecting export and import taxes on the buying and selling of goods and services internationally. This, certainly promotes free trade, but arguably at the expense of local providers who might have to incur import duty in bringing in a product and add GST when retailing the product, for example. Whereas a product ordered over the internet and delivered in the mail, may not incur the same taxation.

To this end, I imagine a regulatory model for Internet Gambling would interest many Federal agencies, such as DBCDE, DSD, CSIRO, ATO, Treasury, Customs, Dept of Industry, Dept of Finance and De-Regulation, Austrac, FaHCSIA, to name a few.

THE CONSTITUTION OF THE COMMONWEALTH OF AUSTRALIA

I question if the Australian Constitution even permits the States to manage E-Commerce³. Certainly the recent “Betfair” case suggests that States cannot restrict cross-border commerce. Moreover, most of the aspects of Internet Gambling (E-Commerce) are Commonwealth matters. A key assumption, therefore, is that the Commonwealth will be responsible for Internet Gambling.

Jurisdiction over banking, financial transactions, credit institutions, credit cards, e-Commerce, telecommunications, broadcasting, privacy, advertising, identity theft and national security are National competencies. Communications based gaming (in all its forms) overlap to varying degrees with such national competencies. The prospect of 7 States and Territories, potentially adopting differing approaches and individually coordinating with federal bodies on matters that may arise from time to time, is not considered feasible, practical or in the national interest.

I argue that Communications-based gambling must be administered through a collaboration of nominated Federal Government Agencies, probably headed by the Department of Broadband, Communications and the Digital Economy (DBCDE), to promote a uniform approach to the regulation of communications based gaming in Australia.

² c.f. a logo design, or remote consulting assignment where the end result of the service provided is tangible.

³ My submission to the Productivity Commission titled “The Australian Constitution” refers.

The less acceptable (in terms of complexity) alternative would be the separation of the activity from the medium on which the activity takes place, or through which it is facilitated. This would result in a shared State / Commonwealth responsibility:

1. There are no obstacles to regulating the gambling activity. The inherent challenges are in regulating the medium and as such, this becomes complex when interstate and international commerce are involved.
2. Under this scenario, the States would regulate the activity of gambling (albeit to National Standards, and remove all restraints to cross-border trade). The Commonwealth would regulate the activities within their existing jurisdiction with the additional role of a “National Gambling Commission” that would have specifically defined roles. I mention this for completeness because I have experience preparing such a model for another Government, and defining the roles of a future National Gambling Commission: it is doable.

A BRIEF HISTORY - INTERNET GAMBLING

I had developed a specialty in mission critical (24x7 operation) and embedded device (e.g. gaming machine) and system (loyalty marketing and monitoring and control) design and regulation by the time I started investigating the possibility of using the internet for e-commerce/I-Gaming in the early 90’s. By the turn of the new millennium, I had demonstrably pioneered online gambling policy, standards, regulations, testing (Australia, South Africa, EU), and operations (e.g. MGM MIRAGE). Through many international conferences, papers, publications, political activity, formation of industry associations, promotion of a responsible code of practice (the basis of the current international standard), I attempted to push international cooperation and solid regulations. However, protectionism and politics suffocated the regulated space and internet gambling remained, the “wild frontier”.

I elected not to get involved in the “underbelly”, and applied my company resources to Sarbanes-Oxley S.E.C. compliance (post Enron). “Unregulated” Internet Gambling is the ideal vehicle with which to launder money and fund illegal activity or the “crimes of patriots”.

An extract from the United States Government Audit Offices report to Congress⁴, follows:

“In the FBI’s view, because of the nature of Internet gambling, money laundering could be conducted through either legitimate or complicit sites. In law enforcement’s view, legitimate Internet gambling sites provide an opportunity to transfer high volumes of money in and out of a number of accounts within a single “institution.” An individual could potentially deposit illicit funds into a legitimate Internet gambling account under a false name and wager a small amount in order to make the account appear genuine to the site operator. After a few losses, the individual could withdraw the rest of the illicit funds from the account. The transaction’s “paper trail” would register a lawful Internet gambling transaction, mingling legitimate money with illicit.

⁴ www.gao.gov/cgi-bin/getrpt?GAO-03-89, page 36.

In addition, law enforcement officials believe a money launderer would not necessarily have to place a wager in order to “clean” illicit funds. A legitimate on-line gaming account could be used as a potential storehouse for illicit funds until they could be transferred to an offshore account. For instance, a money launderer could locate several legitimate Internet gambling sites that had few or no deposit requirements and deposit the maximum amount at one or more of them. The funds could later be transferred into an offshore account as “legitimate” winnings. U.S. law enforcement officials said they also believed that money launderers could develop Internet gambling sites for the sole purpose of laundering money. An operator of a complicit site could theoretically program casino gaming software to react to a specific password or sign-on command, automatically taking a percentage of the deposit and cloaking it as a gaming loss. In essence, however, such a deduction would be the operator’s service fee for laundering the illicit funds. Such a site would also need legitimate gamblers in order to mask the true nature of the operation.”

Sites that may have been started for the above purpose could subsequently buy legitimacy through “recognized” brand associations and go “Main-stream”. One could argue that the biggest concentration of links to ethically challenged organizations and individuals might be found where it is easy to hide the proceeds. A ‘scratch of the surface’ might reveal much, and one should not go looking unless one is prepared to deal with what one might find. In the online space, I guess the perception is the reality? For the same reasons that Poker Machines were kept out of Queensland, Victoria and other Australian States for the longest time, expect subtle and direct opposition to regulating internet gambling!

Anyway, I will not go into the detailed history, but I’ve had an interesting journey.

VIABILITY OF E-COMMERCE REGULATION

Back to the technology and policy...during the early days, the key questions that kept arising were:

- (a) Who are the players?
- (b) Where are the players?
- (c) How do we ensure we get our tax?
- (d) How do we ensure that only licensed sites can operate in our jurisdiction?
- (e) And of course, how do we ensure the government does not get embarrassed?

To address these questions, I developed and had three patents awarded by the World Intellectual Property Organization (WIPO) to essentially regulate and tax the internet using public-private key cryptography, public key infrastructure hierarchy, pyramids of “trust”, reverse-filters, unique biometric identifiers, classification systems, regulatory control and taxation system, and so on. The patents were technically feasible, but my efforts to establish any degree of international cooperation failed. After a few years, I realized that when the global economy was ready to revisit the issue, it would not be prudent for one entity to own the IP, so I let the patents lapse into the public domain. In recent years, I was motivated to publish another patent that would tie everything together, this was filed but after I became aware of certain interests, I also let that lapse (before it was awarded). The business model is simple and the transactional revenue is

phenomenal in terms of dollars (has the potential to eclipse Microsoft), but the risks would not warrant an individual or corporation having exclusive rights to the IP.

If further information on the patents (how to implement the technology, the political impediments and the business model) is of any interest, I am prepared to workshop it.

AN OPPORTUNITY FOR AUSTRALIA

As Internet Gambling went “underground”, and other areas of e-Commerce grew untaxed, unregulated, and internationally, I felt it would only be a matter of time before the world would once again look to Internet Gambling Regulation, if not for Internet Gambling, then for E-Commerce. The methodologies and other items I developed (risk management, testing and securing “mission critical” systems, business operations, regulation, etc. for e-commerce systems), is just as applicable today as it was almost 10 years ago.

E-Gambling is the ideal case study for e-commerce (goods, services, etc.) how to regulate and how to tax. I am an adjunct Fellow of Southern Cross University (SCU) and feel there is an ideal opportunity for applying know-how to a University/Private/Government partnership. The facility could become or aid the technical regulatory arm of any Federal e-commerce initiative, or at the least develop the technology to facilitate the regulation and further research methods. This research unit would be of interest to multiple agencies with an interest in e-commerce.

I have devised a strategy and feel this is a major opportunity for Australia to position itself in e-Commerce taxation space and would appreciate any opportunity to discuss working cooperatively in a research, regulatory, or development capacity.

Perhaps ironically, internet gambling is the most likely catalyst.

CRYSTAL BALL

Many sources identify the US as the major internet gambling market with reports of up to 50% of global spend originating from US players. I believe that liberalization of internet gambling in the US would lead to massive expansion of the global market and force the issue of international tax-sharing arrangements and regulation of E-Commerce, generally. To this end, I feel that liberalization of either “intra” or “inter”-net gambling in the USA is extremely likely based on the following information available publicly:

1. The American Gaming Association (AGA) has voiced support, and the Democrats have garnered substantial support for two Bills to regulate the industry and identify the proper US response⁵.

⁵ American Gaming Association, 2007.

2. The WTO and EU have accused the US Government of illegal discriminatory trade restrictions under current arrangements, with fines imposed and potential liabilities for up to US\$100bn in trade concessions⁶.
3. Recent UK liberalization will enhance proliferation of gambling sites and consumer trust by offering a respectable, reliable regulatory framework⁷, forcing jurisdictions to rethink their substantial offshore revenue and potential taxation and job losses under prohibition.
4. Expanded internet facilities and uptake of digital television and mobile communications have further increased accessibility. Consumers are more familiar and confident with online transactions and, in recognition that e-commerce is a trust-based economy, multi-national brands have proliferated and smaller start-up companies have built player trust on the shoulders of trusted global brands⁸.
5. A deeply depressed US economy.

A senior bureaucrat I once worked with, told me to never ask a public question in government, unless you already had the answer...so if a U.S. Senate inquiry is finally called in the US (as politicians such as Shelley Berkley, Nevada are calling for), I think it is safe to assume the policy paper, regulatory framework, and industry support and positioning would largely be in place, putting the regulation perhaps 12-24 months later.

Nevada is well positioned, having legislation and standards already in place for “mobile”, “system-based” and by default “Intra-net” gambling. Cantor Gaming (I understand, associated with Cantor-Fitzgerald) hold a license for mobile gambling⁹. However, competing interests may retard the potential, so some may look off-shore to be positioned (For example; Harrahs, IGT and the Sands held Internet Gaming licenses in Alderney, in the UK Channel Islands and IGT actually owns the company (Wager Works) that supplies the technology to several Internet Gambling Operators. I developed the regulatory framework for the jurisdiction of Alderney, which then migrated to Gernsey, and now Jersey is well positioned. Unlike the Isle of Man, I understand that the Channel Islands are exempt from EU law (such as the anti-money laundering directive which presents a problem by requiring identification upon deposit, not withdrawal) and being a single system of government can be both flexible and responsive.

Having presented the above argument, I must qualify it with the “curve ball”...That is, the position of the United States Department of Justice is that Internet (international and interstate communications based) Gaming is illegal, but this has never been tested in the Supreme Court. So on that basis, should the US DOJ change their position, it may be that skill-based¹⁰ intra or internet gambling could be a reality very quickly in the United States and occur in parallel with the development of any public inquiry or regulatory framework.

⁶ Responsible Gambling Council of Ontario 2007.

⁷ Stewart 2006

⁸ Toneguzzo & Copher 2006

⁹ http://www.cantor.com/featured_services/gaming

¹⁰ So as not to violate state laws that might define gambling as a game of “chance”.

It is possible that the US DOJ (who have gone after advertising and financial institutions and indicted officers of public UK internet gambling companies), may aggressively pursue those that “aid-and-abet an illegal activity”, such as global audit firms or testing companies that exchange cash for limited audit reports to be posted on online gambling company web-sites. The DOJ, may see the off-shore operators as “buying credibility or trust” through brand recognition. Such a move could “stall” the growth of the industry, as did the targeting of financial institutions several years ago.

REGULATORY FAILURE: Those that know my background will know that I have first hand experience in Australia, Africa, the UK and elsewhere with policy and frameworks for the proposed regulation of internet gambling.

1. In Australia the push for regulated online gambling “failed” because of differences between State and Federal governments, the positioning of the existing wagering and casino/slot operators and subtle international pressures.
2. Significant operations on The Isle of Man “shut down” because they could not compete with unregulated markets by “doing things right”.
3. Alderney, relaxed their regulations and started advertising for licensees to remain competitive, but did an excellent job of managing perception.
4. The UK has recently legalized internet gambling, but in doing so essentially forced licensees off-shore, and are now positing themselves as a “defacto” global regulator by stating what country can be in the “white list”. I note that the United Kingdom is the same jurisdiction that legalized **category D gambling machines for children to gamble on domestically** God help us, if category D migrate to the internet!
5. In South Africa, the push for online gambling failed the first time due largely to the same reasons it failed in Australia, albeit with the added pressure of tribal influence. I liken the US situation to Africa and question if the end result in the US, whatever it may be, will ultimately fail for the same reasons?

It is an interesting state of affairs when regulators advertise (they all do) for licensees as this demonstrably proves that “**regulation is no longer a sovereign right of governments, but rather a marketing option, based on a voluntary business decision that regulation as a facilitator of trust will create barriers to entry and facilitate increased market share**”¹¹.

WHERE TO BASE OPERATIONS: To date, the most successful internet gambling jurisdictions are those with:

1. A single national government,
2. No state or tribal issues,
3. A stable government,
4. Substantial Internet band-width.
5. Ties to a larger economy and not isolated.
6. A credible gambling commission and

¹¹ Toneguzzo, 2000. Australian Institute of Criminology Conference.

7. A small population base, thereby enabling the regulator to offer minimal taxation and fees.
8. A lifestyle that attracts suitably qualified staff.

To this end, in the absence of complete Federal control and regulation (e.g. in EU, US, Australia, Etc.) three jurisdictions come to mind as being potential future “mega-hubs” for internet gambling:

- a. Singapore.
- b. New Zealand.
- c. Jersey (Channel Island).

On the matter of the Channel Islands, Alderney has convinced Guernsey to host gambling servers and is now seemingly working cooperatively with Jersey taking baby-steps, by starting with convincing Jersey to host “disaster sites” (a strategy that was successful in Guernsey). I understand that Jersey has or will be passing a law in 2009. The former Chief Inspector of the UK Gambling Board (an influential and well liked regulator), who subsequently went on to advise Alderney (the Chairman of Alderney, was a key advisor to the UK Gambling Board for many years), is now a member of the newly formed Guernsey Gambling Commission. I suspect we will see the UK operators (and possibly some US operators) based not in the UK or US, but concentrated in the Channel Islands in the absence of any other viable alternative.

MEGA-MERGERS: We have seen the world’s biggest gambling companies either trying to avoid or preparing for bankruptcy, recently. I feel these large gambling companies will come out of their financial troubles through mergers or acquisitions to form cross-industry and multi-national entities. For example, we have seen the Wall Street Journal announce Harrahs, IGT and t-Mobile all working with Microsoft to trial new products. Such arrangements could become more closely tied. I feel we will see mergers of technologies and companies where the collective revenue is larger than the GDP of countries. I sum up the implication of this, with my often quoted belief that e-commerce facilitates a mobile and trust based borderless economy, where regulation becomes only a marketing tool to build trust, but no longer a sovereign right of government. Now put this in the context that most people know *Microsoft*, or *Sony*, or *LG*, or *Nike* or *Coke*, or *Las Vegas*, but comparatively few people *Harrahs*, *IGT*, *Bally*, *MGM MIRAGE*, *The SANDS*, *Aristocrat*, *TabCorp*, etc. and even fewer people internationally know or have a clue about *Alderney*, or *Queensland Australia*, or *Trenton New Jersey*, let alone where they actually are.

If the Governments can’t cooperate, the corporations will. Indeed, we have seen this already with Visa and MasterCard becoming defacto global regulators of the Payment Card Industry with their “PCI” regulations that require certifications, and impose sanctions and fines. The ultimate “big stick” is that as a business, if you don’t comply, you simply are not permitted to use credit card facilities: No cash = no business, in the extreme. This PCI regulation also applies to Governments right down to the level of local councils who allow credit card transactions for the payments of rates, for example. A situation may arise where Visa fines a government for non-compliance. Point being: **Corporate Regulation of Government on a global scale is now a reality.**

So the power to regulate and where to regulate, may at the end of the day, be a mute point if the brand trust matters more than the regulation.

RESEARCH

At this time, someone might be motivated to commit a fraud related to a gaming machine and then apply that same technology or process to a vending machine, or a transportation ticketing machine, or a voting machine, or an ATM or similar embedded technology. The risk is arguably low.

Some analysts are saying Internet gambling is projected to be worth 100s of billions by 2010, and so the motivator to “break in” will be higher, and the means to do so more complex than a simple gaming machine. I see internet gambling more as “pure” e-commerce and as such, a pre-cursor to realizing the full potential of global e-commerce. If the same technology used to “break in” or extort an internet gambling site is applied to a stock-exchange, oil prices, banking system, or national infrastructure the implications could be devastating.

The research needed to be conducted into internet gambling is the same research needed to be conducted into many aspects of E-Commerce, generally, mostly related to law, and policy, such as:

1. Currency exchange
2. Interstate and International commerce and impact on trade relations.
3. Federal jurisdiction over gambling regulation.
4. Foreign policy, for example OECD¹² and WTO¹³ considerations.
5. Balancing the interests of the remote and premises-based industries, and avoid the possibility of tax induced market distortion.
6. Balancing the benefits of attracting new business to Australia against the potential threat to the existing tax base, for example by creating opportunities for manipulation of supply.
7. European Union and OECD Guidelines on the Protection of Privacy and Trans-border Data Flow of Personal Data.
8. European Union and other jurisdictions directives on money laundering.
9. The implications with respect to cyber-security and international relations.
10. Where is the contract? At the server, at the player terminal, both or neither?

¹² Organization for Economic Cooperation and Development

¹³ World Trade Organization.

11. Competition between States for taxation and implications on the erosion of the regulatory frameworks in order to compete with international offerings.¹⁴ Indeed the whole subject of tax remittance, levels and application of taxation on an international scale is a complex one. Many existing jurisdictions with a low population infrastructure to support offer 0% tax to the internet gaming operator and a very low corporate tax rate. Then there are other matters to be addressed such as an Internal Revenue Service requirement (IRS, United States) of taxation on international winnings (a tax on players). This alone, if unchanged, would make Internet gambling from the United States, even if it is legalized, an unviable business proposition¹⁵, versus the situation in Australia where tax is not withheld on winnings. I feel that cooperative agreements on taxation will be the most challenging aspect of all.

Some alignment of international policy and law must occur for there to be any cooperative agreements.

INTERNET GAMBLING REGULATION

A corporation has a legal obligation to its shareholders to maximize profit. A government has an obligation to support industry, and to its citizens. That is, a role of government is to ensure a balance—to regulate. The recent global economic collapse is arguably sufficient evidence to prove advocates of market freedom (self-regulation), wrong.

I'll will not go into what Internet Gambling is, market size or growth as there is sufficient information available via various search engines. Furthermore, some papers or conference proceedings that I have written on the subject and could make available are included at attachment I. Much of this is available online through an internet search engine.

In the remainder of this submission, I will move to a discourse on policy issues to consider when contemplating regulation and the formation of a regulatory agency. I do not consider it appropriate to offer detailed argument on the policy issues, a risk management model, internal control framework, or the specific functions to be performed by a regulatory agency, as these are more commercial matters. I am, however, available to discuss such matters with the Productivity Commission, DBCDE, or other appropriate Federal Department at a later time.

No system or business is infallible. Accordingly, the control objective of any effective regulatory system is to ensure that there are sufficient checks and balances in place to insure that if someone bypasses the system they require collusion and leave an audit trail. This can be somewhat complex for information-technology-based systems where a great deal of control may reside with

¹⁴ The majority of enabling Internet Gambling Jurisdictions actually advertise for and compete for licensees as they acknowledge that the licensees brand - or that of the licensees public accounting firm - is stronger than that of the jurisdiction, so at the end of the day, with regulation as a marketing tool and not a mandatory requirement, it comes down to which regulator "cuts the best commercial deal.

¹⁵ For example, in Australia, prizes are not taxed and not paid in an annuity, no matter what the size of the prize.

a few individuals in the information technology department, and the systems are dynamic by design (whereas traditional forms of regulation tend to be more static, in nature).

Moreover, in a complex, mission critical (e.g. 24x7 operation vulnerable to constant security breach), business system such as an internet gambling system, no one component stands in isolation and no one aspect of the business provides the solutions to mitigate business and regulatory risk. Some risks are mitigated through technology, others through procedures, and others through insurance and so on. To this end, an effective regulatory model will take a defense in depth “onion layer” and holistic approach, and be one based on flexibility¹⁶ in regulation with demonstrable due diligence in process. That is:

1. Specify regulatory requirements and allow the industry to be innovative in how the risk is mitigated. Regulator to determine if mitigating strategy meets the intent (control objective) of the requirement: Regulated Risk Management.
2. Independently confirm the industry’s claims of compliance through testing and audits of the claims of compliance with the regulatory requirements, prior to permitting communications-based gambling equipment to be operated.
3. Look at software, hardware, networks, operating procedures, people, physical premises and environment.

I therefore recommend that whomever prepares the policy and regulatory framework, adopt the methodology proposed in the 2006 Beijing Paper¹⁷, enclosed herewith at Attachment II, whereby all regulatory requirements are justifiable by root cause back to policy.

CHALLENGES FOR REGULATORS

It is essential for regulators to note that technology assisted gambling presents a regulatory paradigm where technology is driving public policy and facilitating both the means to avoid regulatory oversight and enhance it in a way never before imagined.

Unlike traditional gambling technology, online gambling technology and operations may become obsolete, non-compliant or introduce serious business exposure immediately after approval is

¹⁶ The need for a more flexible approach to regulation has been identified by the British Government where, in March 2002, the Department of Culture Media and Sport announced the government’s response in “A Safe Bet for Success – Modernising Britain’s Gambling Laws”, in which it stated: “Licensing and regulating online [c.f. remote] gambling will present a number of challenges that do not necessarily arise through more traditional forms of gambling media. The government is satisfied that these challenges can be met, not least by giving the Gambling Commission sufficient flexibility to respond promptly to any technological advances that may undermine the regulatory regime”. I had some input to the House of Lords and Common’s enquiry into gambling, was one of the founding Directors of IGGBA, UK in 2001 and had close involvement with the GBGB and DCMS, but was rather disappointed by the decision to legalize gambling for children in Category D machines.

¹⁷ Paper presented by Keith Copher and written by Steve Toneguzzo (2006) ‘Gambling Regulation: The Case for Managed Risk’, *Proceedings of the Gaming Industry & Public Welfare Conference*, Peking University, Beijing 100871, China. ISBN: 99937-58-26-4.

granted. Also, unlike traditional gambling technology, a great deal of power and trust is placed in the hands of the few people in an organization who operate and understand the technology.

Currently the majority of the regulatory agencies have little expertise, if any, in the complexities of technology assisted gambling and specifically e-commerce infrastructure systems. This expertise will need to be brought in-house, or outsourced to guarantee effective regulation. The expertise required is very different to that required to test traditional slot machines.

The different demographic of remote gamers will demand more complex and interactive games, leading to further technical challenges. The increased accessibility of the gaming product will stimulate quicker market acceptance, shorter shelf life on games, and more demand for approvals. This will promote continued innovation and dictate a need for risk management in regulation and demonstrable due diligence, as discussed above.

Moreover, if the communications based gaming is on a public network it will be subject to constant attempts at security breaches (hackers) as are all e-commerce systems today. Internet gaming sites in Europe, have been the target of “extortion rackets” whereby hackers have demanded money in exchange for not crippling or destroying a sites’ connectivity with its players: Often successfully, due to limited security measures employed by the European remote gambling sites at the time.

There is no point having an effective regulatory framework if there is no capability or capacity to enforce it. I do not believe State Gaming regulators have the wherewithal or legislative authority to enact or enforce any form of Commonwealth laws related to E-Commerce.

In summary, the regulator of “tomorrow” will need to be high-tech, flexible, Federal, and conducive to risk management principles.

ENSURING INTEGRITY

Prior to a licensed Internet gambling system operator being permitted by a regulatory agency to conduct business, the following proof of reasonable compliance with the regulatory requirements must be demonstrated:

1. Compliance of the technology.
2. Compliant configuration and installation of the technology.
3. Compliant environment in which the technology is to operate (both physical and logical).
4. Effective system of internal controls.
5. Capable operating staff.

“Compliance” can imply many things such as: personnel checks, physical security, network security (defense in depth), production site isolation from the vendor, the security of the vendor’s development environment, procedural security controls, operating system and application

security, change management, configuration control, validation and verification, audit trails maintenance and so on.

The extent to which a vendor or operator (licensee) puts in place mitigating strategies to treat risk should be dictated by the vendor or operator's risk assessment. The licensee should make claims about compliance, which would be verified as part of the compliance audit.

The challenge for a regulator is to define sufficient minimum requirements that present a level of risk that the regulator can accept, whilst at the same time do not "suffocate" innovation or business operations. The following mechanisms must at least be a consideration:

OPERATIONAL CONTROLS: Extensive consideration must be given to Internal controls and operating procedures.

SOFTWARE DEVELOPMENT ENVIRONMENT: Security of the development environment is paramount. A review of the vendor's development environment and development controls and procedures should be undertaken as a part of the approval process. For example, if a hacker wanted to find a "weakest link" in security (to steal sensitive information, manipulate the system, or damage multiple sites) an effective way may be through the installation of a Trojan, hardcoded password, or other mechanism in the product, which could be propagated to the production environments of the operators.

SYSTEM BASELINE: A key objective is to baseline a "trusted" system, then employ techniques to ensure that the system remains "trusted". Such techniques, could include minimizing and hardening of operating systems, system lock-downs, supervised trusted application installation and configuration, system monitoring of critical static files and operating system files, and so on.

To establish a baseline, the proposed internet gambling operation must be fully assessed against government requirements.

To put this in perspective: When a regulator relies on a test report to say that an Internet gambling application, the games, the network and IT controls comply with the government requirements they are placing an enormous amount of trust in that report and the agency that produced it (albeit government or otherwise) and would want to be absolutely assured of that agency's independence.

I discuss the importance of Standards setting and Testing in ensuring industry integrity in another submission to the Productivity Commission entitled: "Control Through Technology". I will not repeat those issues here.

Properly ensuring the compliance and integrity of a complete online gambling operation is not a simple exercise. It is made more challenging when a regulator and operator have the mindset of "what does security and testing add to my bottom line?" A key role of a regulator is to have sufficient knowledge to ensure that "all testers / auditors" are equal.

An appreciation of the scope of testing may be ascertained from the following items, which will typically be required to be submitted to demonstrate compliance. Each of these items would be subjected to many scripts, methods and procedures to assess claims of compliance.

1. Document Library;
2. Point-by-point response or compliance claim with respect to regulatory requirements;
3. Security Statement of Claims/Risk Assessment;
4. Comprehensive Functional Description;
5. System Design Documentation;
6. Game Design Documentation (for each game);
7. RNG documentation;
8. Database Design Documentation;
9. Encryption and authentication algorithms and documentation;
10. Detailed Description of Payment Systems;
11. Financial Interface Specifications;
12. Fault Management Procedures;
13. Change Management Procedures;
14. Game Integration Procedures;
15. Testing Documentation;
16. Software Build Procedures;
17. Software Release Procedures;
18. System build documentation;
19. Installation Documentation;
20. Network Design document (including network diagram);
21. Network as built documentation;
22. Minimization and hardening procedures;

23. System Monitoring Specifications;
24. Interface Protocols;
25. Software Verification Tool and Documentation;
26. System Configuration Parameter Descriptions;
27. Employee Roles Documentation;
28. Reporting Function Specifications;
29. Systems Operations Manual, and
30. Internal Control Manual (ICM).
31. Testing system/environment;
32. Game/Game engine simulator or tools;
33. RNG test driver or empirical data;
34. Source Code;
35. Installation medias;
36. All Games.
37. Build environment
38. Access to development environment
39. Access to production site prior to go-live.

SYSTEM BASELINE: Having completed a base-line, change control with respect to upgrades and enhancements is critical to efficient business and regulatory operations. An online business cannot rely on traditional Mon-Fri (9 – 5) regulatory availability. Moreover, given the complexity, it is critical to the operator to minimise the financial impact of changes. To this end, as part of the risk assessment, the regulator should provide security classifications to major system components. The classification associated with a change would then determine if the regulator needs to pre-approve the change or permit the operator to make changes without regulatory approval (provided the integrity of the base-line is maintained). I understand this is working effectively with a “traffic light” system in Alderney, Channel Islands¹⁸.

¹⁸ Although I must caution the reader that it may have been some Alderney licensees who’s security measures enabled them to be the victims of cyber-extortion from organized crime. This was eventually dealt with by MI6 investigators working with foreign agencies.

AUTOMATED CONTROLS: The industry should design and manage their systems in a manner that provides for automation of controls and in doing so minimize the overhead required for regulatory inspections and general audit functions.

SOFTWARE VALIDATION AND VERIFICATION:

Tools and methods for “remote builds”, “testing”, and “remote installations” negating the need for a government tester to physically visit the developer or operator premises, or the vendor to supply a test system to the regulator, are also important measures in ensuring the efficiency of regulatory measures.

Production Site Validation and Verification is far more cost effective if it can be securely performed, remotely.

The use of signatures or keys of critical static system files is also recommended to automate the validation process.

RESPONSIBLE PROVISION OF GAMBLING

Internet gambling provides greater accessibility of gaming products, while at the same time providing an unprecedented ability for the players to control their gambling experience and be informed and educated. The technology also enables providers to conduct completely transparent operations with every single transaction able to be audited by the regulator.

The reality of the situation is that right now any Australian can gamble on any internet gambling site anywhere in the world at any time of the day and night and not have any guarantee that the games are fair, that they will be informed on how to control their gambling and that they will be able to go somewhere to get help when the gambling becomes a problem. Most probably don't realize there Australia has a prohibition, and if they did it is unlikely they will report an activity they enjoy when they know they are “untouchable”. To this end, I would not rely too heavily on any statistics the government might have on complaints over internet gambling sites without first researching:

- (a) Who knows about it? and
- (b) Who cares anyway?

Using the analogy of road safety, the builder of the roads can design the roads for safety; he can provide warning signs on the road. The drivers can be trained in road safety. The standard of the car on the road can be defined (e.g. seat-belts, air-bags, etc.). In times of trouble, a quick response time from police and ambulance can be provided. Not one of these measures can be successful in isolation. The technology, the environment, the education, the help and the warnings must all be considered in a holistic approach to road safety. Similarly, the approach to responsible gambling has to be multi-faceted.

However, despite taking all reasonable care in a holistic approach to road safety, if the driver steps on the accelerator and not the brake when heading for red light... well, what can you do?

Perhaps you can make sure you are not irresponsibly directing the driver's foot toward the accelerator and you can make sure that the driver has been informed to at least be aware that the accelerator makes the car go and not stop. Unless you're going to take away the freedom to drive (which happens to repeat offenders), one must respect that a human being is capable of freedom of choice.

Coming back to the driving analogy, in a separate submission to the Productivity Commission, I put forward the argument for a "Gambling License". Such a license would be just as applicable to on-line transactions as off-line and would go a long way toward addressing some key policy issues within Australia, such as:

1. Where is a player physically based (for tax remittance between the States).
2. Age of player¹⁹.
3. Is the player who they say they are?

LOCATION OF THE PLAYER

A critical component in the success of communications based gambling is in confirming the location of the player prior to enabling them to play on the site. That is, are they gambling legally?

The use of IP addresses provides some assurance, but is not entirely effective. For example, any Australian citizen who uses AOL as their ISP are assigned a US IP address, even though they are located in Australia.

Domestically, the solution to this problem may be realized in one of several ways:

1. If using a cellular device, the cellular networks can use the same technology they use for locating 000 callers to locate the location of the cell phone accurate within 15 feet outdoors and 100ft indoors²⁰. Global consortiums are also working on this challenge²¹.
2. If using a Wi-Fi device, technology exists to track the location using wireless infrastructure to locate any standard 802.11b mobile unit, such as laptops, PDAs, barcode

¹⁹ All reasonable measures can be taken, but ultimately, parents must take responsibility for what occurs in the family home. The government does not currently enter the family home to supervise a parent restricting minor's access to alcohol, cigarettes, rated material, etc., and I suggest it would be equally difficult for the government to take such a paternal approach to remote gaming.

²⁰ <http://www.sciencedaily.com/releases/1999/06/990630014801.htm>

²¹ The Liberty Alliance (www.projectliberty.org) is an alliance of more than 150 companies, non-profit and government organizations from around the globe. The consortium is committed to developing an open standard for federated network identity that supports all current and emerging network devices. Federated identity offers businesses, governments, employees and consumers a more convenient and secure way to control identity information in today's digital economy, and is a key component in driving the use of e-commerce, personalized data services, as well as web-based services. Membership is open to all commercial and non-commercial organizations.

scanners and RFID readers, in addition to tags attached to people or any other assets and equipment.

3. If using a fixed device such as a home computer, a GPS²² locator can positively I.D. the location of the home computer.
4. If gaming from a licensed premises (e.g. a pub), then the physical terminal ID should be sufficient as assigning the remote playing device to a physical location.
5. Another mechanism may be a callback. For example, an automated system calls the player back on a fixed number within the State and using voice recognition technology verifies that it is that person who answers the phone and answers a challenge question. Technology would be required to confirm that the fixed number was not being diverted to a number out of state.

Internationally, the solution is possible, but more complex. I refer the reader back to my 2000 patents, but will not go into any more detail here.

Well...I hope my ramblings have been of some use.

Yours sincerely,

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²² <http://electronics.howstuffworks.com/gps.htm>

ATTACHMENT I:

TONEGUZZO, VARIOUS PAPERS AND PRESENTATIONS ON ONLINE GAMBLING

6th National Association of Gambling Studies Conference (Fremantle), 28th – 30th September 1995. Paper: *The Internet: Entrepreneurs Dream or Regulators Nightmare*

2nd National Commercial Gaming Convention (Melbourne), 28th – 29th November 1995
Paper: *Gaming on the Internet*

7th National Association of Gambling Studies Conference (Adelaide)
18th – 21st November 1996
Paper: *Internet Gaming the Next 5 Years.*

South Australian Parliament Social Development Committee (Adelaide), *September 1997*
Submission Paper: *Internet Gaming.* Called to give evidence (Hansard).

Gaming and Liquor Forum (Fullarton), 21st October 1997, Paper: *The Internet – Competitor of the Future*

8th National Association of Gambling Studies Conference (Melbourne)
November, 1997. *Workshop on Internet.*

Australian Institute of Criminology Gambling Technology & Society (Sydney)
7th – 8th May 1998. Paper: *Controlling the Technology or Controlling the Games*

3rd European Conference on Gambling Studies & Policy Issues (Germany)
1st – 4th July 1998. *Professor Jan McMillen presented my paper on my behalf.*

IQPC, Gambling in Cyberspace (Sydney), 9th – 10th August 1999. Paper: *Minimising the risks of taking your gambling project online.*

Senate Select Comitee on Information Technologies (Parliament House, Canberra).
15 September, 1999. Submission Paper: *Online Gambling.* Called to give evidence as an expert witness.

3rd Annual International Symposium on Internet Gambling Law and Management (London).
28 - 30 November, 1999. Paper: *Online Gambling: Minimising the Risks.*

Australian Institute of Criminology Conference, Transnational Crime. 11th – 12th May 2000.
Paper: *Technologies for the Regulation of Online Gambling.*

International Surveillance and Security Conference (Darwin)

2nd – 5th October, 2000. *Presentation: The changing role of casino security and surveillance departments in Casino Internet Gambling Operations.*

World Internet Gaming Summit (Miami, Florida, USA). 15 – 16 March, 2001

Presentation: Minimising the Risks of Taking your Business Online in a Regulated Environment.

Nevada State Bar Association, Carson City, Nevada, USA. May, 2001. *Presentation: Internet Gambling Technology Regulation.*

Nevada Gambling Control Commission, Nevada Gambling Control Board, Nevada Attorney General's Department. 31 July, 2001. Expert Witness Presentation: *e-Gambling Regulatory Compliance.*

First Annual Interactive Expo and Conference (Las Vegas, Nevada, USA). 26 – 28 September, 2001. *Presentation: Surviving the Regulatory Testing Environment – Developing Standards for Internet Gaming Standards.*

10th Annual Casino & Gaming Conference (Gold Coast, Australia)
4^h – 5th March 2002. *Presentation: Where Does the Australian Gaming Industry Stand from an International Perspective.*

World Internet Gaming Summit (Miami, Florida, USA). 21st – 22nd April, 2002. *Presentation: e-Gambling Regulatory Compliance*

2nd South African Gambling Conference (Sun City Resort). 18th – 19th April 2002

Paper: Internet Gambling - International Perspective

Industry Workshop – Discussion on policy and key principles of the regulatory framework I prepared for the Government.

Paper presented by Keith Copher and written by Steve Toneguzzo (2006) 'Gambling Regulation: The Case for Managed Risk', *Proceedings of the Gaming Industry & Public Welfare Conference*, Peking University, Beijing 100871, China. ISBN: 99937-58-26-4.