

The UNLV IGI Global Gaming Capital Initiative

Quarterly Progress Report

Reporting Period: July 1st to September 30th, 2016

October 31, 2016

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Project Purpose

The Global Gaming Capital Initiative (GGC) seeks to reinforce Nevada's position as the world's thought leader in gaming and hospitality, which remain the largest contributors to Nevada's overall economy and the largest contributors of jobs for Nevadans. The acceleration of globalization and the rise of new technologies threaten the continued viability of Nevada's gaming-related economy, and focused investment in research and innovation is necessary to maintain Nevada's competitive advantage.

In response, the UNLV International Gaming Institute (IGI) has proposed a strategy that will:

1. Provide two reports (one focusing on design and one focusing on industry, government, and academic strategy) that will research, define, and develop recommendations for "The Integrated Resort of 2050." Specifically, this project will develop initiatives that ensure that stakeholders are doing all that they can to ensure the long-term health of the gaming/hospitality sector in Nevada.
2. Build upon a successful existing model to create innovative and commercially viable games that attract the next generation of gamblers through the Center for Gaming Innovation (CGI).
3. Increase the efficiency, productivity, and profitability of non-gaming operations in integrated resorts through the collaboration of industry, entrepreneurs, and UNLV student inventors through the Hospitality Lab.
4. Examine the costs and speed to market challenges for gaming innovations by conducting research that explores these key issues, and then advocating for more consistent regulation across jurisdictions where appropriate.
5. Strengthen the economy of Nevada by developing initiatives that expand the leadership role of women in the gaming industry, thereby expanding the pool of talent available to lead this industry.

The Governor has stated his commitment to reinforce Nevada's status as the global intellectual capital for gaming and hospitality, and has called upon UNLV to lead the way. This Global Gaming Capital Initiative answers that call, with effective and appropriate academically-based strategies to achieve these objectives.

Section I: Proposal Progress

During the reporting quarter, the Global Gaming Capital Initiative has continued to progress toward meeting proposed metrics. Major accomplishments for the current reporting period include:

1. Major Accomplishment 1: UNLV Innovation Showcased at the G2E Global Gaming Expo's Innovation Lab

In late September the American Gaming Association offered the first-ever Innovation Lab at the G2E Global Gaming Expo. Located in the heart of the showcase floor (directly opposite of IGT's own showcase space), the Innovation Lab offered three days of presentations and discussions on changes in the gaming industry and showcased future innovations. The Center for Gaming Innovation was invited to participate in this event and was featured prominently on the first and second day. Three student innovations were presented and showcased on the opening day of the Innovation Lab. Troy Pettie and Evan Thomas demonstrated their radical new puzzle slot game "Line em Up" (which seeks to solve the industry problem of adding skill-based games to attract Millennials); Brittney Martino demonstrated her Light Shield Card shoe (designed to eliminate edge sorting, a major problem that led to tens of millions in industry losses); and John Lukasik demonstrated his house-banked fantasy football game Scoring Frenzy (which creates, for the first time, a compelling house-banked fantasy football game, thereby potentially launching the fantasy football wagering era in Nevada's sports books). In addition to these three student presentations, Dr. Yoseloff gave a presentation on the state of innovation in our industry today.

All of these presentations attracted sizeable audiences, were well received, and generated media attention. Dr. Yoseloff's insights into innovation in gaming was covered in a piece in the *Las Vegas Sun* while Troy Pettie and Evan Thomas' groundbreaking puzzle slot "Line em Up" received a write-up and video in the *Las Vegas Review Journal*. As a result of their demonstrations at the G2E Innovation Lab, all three student innovations received promising commercialization leads with major casino game distributors.

Hospitality Lab director Robert Rippee also gave presentations on eSports, Hospitality innovation, and robotics and drones in hospitality at the Innovation Lab.

The Lab generated significant media interest, including:

Las Vegas Review Journal. September. "UNLV Students develop Candy Crush-like game for casinos. Article features CGI student inventors Troy Pettie and Evan Thomas and their bold new slot game.

<http://www.reviewjournal.com/business/casinos-gaming/unlv-students-develop-candy-crush-game-casinos>

Las Vegas Sun. September. "UNLV gaming expert laments industry's lack of innovation."

Article features Dr. Yoseloff's take on the state of innovation in gaming today.

<http://lasvegassun.com/news/2016/sep/29/unlv-gaming-expert-laments-industrys-lack-of-innov/>

2. Major Accomplishment 2: IGI designs, develops, and launches eSports Lab

Robert Rippee, Director of Hospitality Lab, launched Nevada's first (and quite possibly the first ever) eSports Lab at a major university, and created Nevada's first (and quite possibly the first ever) eSports class – built upon the foundations of IGI's established model of classroom-based innovation. The class is based upon exploring and potentially fulfilling a fundamental problem facing Nevada's Integrated Resort (Casino) Industry: How to engage the millennial by creating an economically viable business model for eSports in the Integrated Resort. The course was opened for registration two weeks prior to the beginning of the semester, and filled within a few days. The twenty-one students range from undergraduate business and hospitality to Law School students. More information will follow in the next report (when the semester ends), as industry showcases and mentorship initiatives are thriving in this new environment.

3. Major Accomplishment 3: GOED/Governor Sandoval's Trade Mission to Australia.

In late July and early August, IGI Executive Director Bo Bernhard was invited to this trade mission to help organize the mission's gaming-oriented initiatives. This successful visit included several major gaming milestones, including 1) visits with CEOs from IGT, SciGames, Ainsworth, and Aristocrat to discuss challenges and opportunities for these Nevada companies as they export to Australia (the international market with more gambling machines per capita than any other), 2) major presentations to various Chambers of Commerce emphasizing the cross-national importance of gaming, and 3) a major new collaboration, signed into effect by Governor Sandoval, between IGI and the University of Sydney (Australia's top research university) on sports wagering integrity – a topic of central importance to the State of Nevada as major new sports leagues eye expansion into Las Vegas. This trade mission

represented a major milestone in Governor Sandoval’s vision of building IGI into a “global intellectual capital,” in a way that reinforces the state’s status as the “idea factory” and primary exporter in the global gaming-tourism economy. It goes without saying, perhaps, but these kinds of initiatives are precisely what is needed for the state (and the City of Las Vegas) to maintain its leadership status in the growing international tourism industry.

Following this ground-breaking trip, the Las Vegas Review Journal featured a piece on IGI’s status as the world’s most respected gaming institute – in essence, validating that we are achieving the mission that this Global Gaming Capital Initiative sets out to achieve.

<http://www.reviewjournal.com/opinion/columns-blogs/inside-gaming/unlv-s-international-gaming-institute-world-s-most-respected>

4. Additional Accomplishments

- **International Center for Gaming Regulation establishes its reputation as a global center of excellence**

Following the appointment of the full staff complement of the International Center for Gaming Regulation, the aim during this quarter was to lay the groundwork for ICGR to become an international center of excellence in the area of gaming regulation, which in turn serves the state’s status as the Global Intellectual Capital as it expands into new markets. The focus of the Center in achieving this goal is to ensure that the world’s regulators have the best research and education available, thereby ensuring the long-term sustainability and growth of the industry as a whole.

In the area of research, the following developments emerged this quarter:

- Following the Center’s call for Research Fellowships with a view to promote research in the area of gaming regulation, eleven applications were received. These applications were subjected to peer reviews where after it was decided to award two new fellowship positions. These appointments will take effect on November 1st with completion dates of May 1st. As part of the fellowship program, the Principal Investigators will speak at international conferences on their research topics and upon completion will produce white papers which will be used as a basis for “Summits” convening the world’s gaming regulators.

- The Center's team is currently in advanced discussions with the British Columbia Gaming Regulator on a progressive restructuring of their regulatory framework and practices. This is a jurisdiction (like most gaming jurisdictions around the world) that hosts more than a dozen Nevada gaming and technology companies.

In the area of education, the following progress has been made:

- The Center has developed regulatory educational programs in Pre-Licensing, Financial & Background Investigations, and Gaming Audit, Compliance, and Enforcement. A Pre-Licensing Financial & Background Investigations program coincided with the Global Gaming Expo (G2E) in September. This course rapidly filled up, and class evaluations were positive.
- The Center hosted a major global roundtable at the G2E in September. This event was a symbolic and substantive success, as it was attended by 50 regulators representing 25 jurisdictions around the world, and reviews were uniformly positive about the opportunity to convene and share in this ground-breaking cross-jurisdictional setting. The Center is currently in discussions with the major European gaming event (ICE conference and exhibition in London) about offering a similar roundtable program at their event in February.
- In addition to this course, the Center began offering its Essentials of Gaming Law & Regulation aimed at educating executives, attorneys, and industry compliance staff new to the gaming industry – as this population was identified as having particularly strong educational needs, given that so few individuals come to regulatory positions with experience. The Center is also looking at cutting-edge topics that new (or novice) jurisdictions are suddenly finding important; the first such course, to be held next quarter, will be on 'Understanding Sports Betting', as the federal government contemplates widespread sports betting legalization.
- In addition, the Center proposed, and was awarded, a customized training program for the Panamanian regulatory body - Junta de Control De Juegos - for delivery in December 2016. A similar customized program in the area of gaming audit will be delivered in December to the Michigan Gaming Authority. Other proposals, in various stages of progress, are aimed at new jurisdictions in Alabama, Georgia, Brazil, and Japan. The Center is fast becoming the go-to educational resource for the global industry.
- The Center is currently in discussions with the North American Gaming Regulators Association (NAGRA) to provide all regulatory training for NAGRA's members. In addition, the Center has worked with the training branch of the National Indian Gaming Association (NIGA) on possibly partnering on training programs. This

would, of course, represent a comprehensive move toward our objective of becoming the world's educational resource for regulators.

In sum, this Center is proceeding exactly as planned – as a go-to thought leader in gaming regulation and policy, which of course is so crucial to the successful operations of many of Nevada's largest companies.

- **IGI Director of Research recruited**

Further reinforcing the GOED/KF innovation mandate, IGI hired a new research director (at no cost to GOED – 100% of salary/benefits paid by UNLV/IGI). Dr. Brett Abarbanel is the world's leading authority on eSports and internet gambling research. Upon earning her Ph.D., Dr. Abarbanel chose a faculty position at UCLA over Harvard – and while at UCLA for the past three years, she headed the university's social and recreational gambling initiatives. Dr. Abarbanel was attracted to UNLV by the innovation initiatives outlined above – specifically, the eSports lab, the Hospitality Lab, and our Center for Gaming Innovation. Dr. Abarbanel has provided keynotes on her research at virtually all of the major conferences in our field, both here in the United States and in Europe and Asia. This hiring is a major coup, not just for IGI but for UNLV as it seeks to achieve Top Tier status as a research university.

- **Ambassador Program – Singapore & Macau**

IGI Executive Director Bo Bernhard traveled to both Singapore and Macau, where he delivered industry-facing educational and leadership programs based on the latest research – to a Las Vegas gaming industry company (Las Vegas Sands) with a global footprint. These programs have become quite popular – in both locations, there were 3 days' worth of programming – and also represent a diverse and non-GOED-supported revenue stream that comes directly from industry leaders. Importantly, this program served as a foundational training program for the opening of the new Parisian Macao, the newest property in that jurisdiction.

- **IR 2050**

The Knowledge Fund-supported IR 2050 (which funds a research assistant focusing on “the integrated resort of the future”) continues to flourish as well. This research assistant has allowed us to partner with the renowned Hospitality Design program in the UNLV School of Architecture (SOA HD). This semester, students in both programs (IGI and the SOA HD program) are collaborating on two projects: 1) the ways in which hyperloop transportation can be incorporated into Las Vegas Strip integrated resorts, and 2) the ways in which globalization of gambling game choice and non-gambling amenity choices will affect Las Vegas Strip companies.

- **Gaming Innovation**

The Center for Gaming Innovation continued to develop its role as a resource to the global gaming industry on the topic of emerging gaming products. During this quarter, CGI explored partnerships with Pechanga Resorts and Casinos, the British Columbia Lottery Corporation, and ClubNSW (an Australian operator association) to place the CGI's newest games on their floors.

CGI was also featured this quarter in various media publications: local (see links on page 4), national, and trade.

Club Life Magazine. September "What can we learn from Pokemon Go? Why video games are the future of gambling game design. Contribution written by Dr. Sahl.

https://issuu.com/cnsw/docs/clublife_sep_2016

Global Gaming Capital key speaking/advising opportunities this quarter included:

- **Hospitality Innovation**

Robert Rippee, director of Hospitality Lab and eSports Lab, was invited to speak at three conferences:

- June – Panel discussion in Hospitality Innovation specifically robotics, Hospitality Technology Conference, New Orleans, LA.
- September 27 – The 26th Annual Lodging Conference held in Phoenix, AZ. Rippee spoke on hospitality innovation at UNLV to a packed room of senior hospitality executives, developers and related companies.
- September 28 - 29 –Innovation Lab at G2E – delivered presentations on robotics, drones, and innovation in hospitality.

- **Gaming Innovation**

Executive Director Dr. Mark Yoseoff spoke on innovation at G2E Global Gaming Expo at the end of September.

- Three CGI student innovations were presented at G2E Innovation Lab.

- **G2E Keynote CEO Panel**

For the third straight year, IGI Executive Director Bo Bernhard moderated the CEO panel that opened the Thursday of the Global Gaming Expo. This year, CEOs from commercial casino, tribal gaming, and gaming technology companies focused on innovation – as Dr. Bernhard guided the conversation through a range of topics including sports betting, eSports, the convergence of hospitality and gaming, the relationships between tech providers and operators, and the future of the casino floor.

- **National Council on Problem Gambling Conference**

Bo Bernhard delivered two keynotes at the nation's largest problem gambling conference – which held its 30th event in New York City in July. The first was a TED-style talk examining the ways in which the gambling research field sits “on the shoulders of giants,” and the second was a closing panel on The State of Gambling Research. This event was attended by 500 international representatives from non-profit, industry, and government sectors.

- **Brett Abarbanel speaks at EASG Conference in Portugal**

IGI Research Director Dr. Abarbanel delivered a presentation entitled, “The future of Gambling Spaces: eSports and the world of competitive video gaming,” as a keynote plenary session at the European Association for the Study of Gambling's 11th European Conference on Gambling Studies and Policy Issues in Lisbon in September 2016. The talk generated a good amount of interest from regulators, industry, and academe from around the world and IGI has been asked to submit funding proposals for research in eSports and gambling to the GB Responsible Gambling Trust.

- **Midwest Gaming Regulators Seminar**

In July, André Wilsenach participated in a one-day regulators seminar organized by GLI, where he spoke on the regulation of iGaming and Mobile Gaming.

- **Singapore Symposium on Casino Regulation and Crime**

In July, André Wilsenach attended the 4th Singapore Symposium on Casino Regulation and Crime, where he spoke about Regulatory Enforcement and Supervision.

- **UNLV Gaming Law Conference**

In August, André Wilsenach and Jennifer Roberts participated in the UNLV Boyd School of Law's Gaming Law Conference. André moderated a session on the challenges which new gaming and betting products pose to regulators. Jennifer moderated sessions on the regulation of casino gaming in New Jersey and technology compliance matters. André also addressed the conference on the functions of the new Center.

- In August, Jennifer Roberts coordinated a Continuing Legal Education seminar through the Nevada State Bar on the intersection between gaming and the entertainment industry. During the one-day event, she moderated a panel discussion among leading gaming company counsel on entertainment contracts.
- In September, André Wilsenach contributed the introductory chapter to the 3rd Edition of the book 'Gaming Law – European Lawyer Reference'. This book is issued annually and contain the regulatory frameworks and practices of all major legal gaming jurisdictions around the world.
- In September, Jennifer Roberts authored an article on key decisions made by Nevada courts of law that affect gaming in *Nevada Gaming Lawyer* magazine.

- In August, Jennifer Roberts commenced instruction of the fall semester course, Fundamentals of Casinos Operations & Management, at the UNLV William S. Boyd School of Law. She also started teaching the Gambling & Gaming Law course offered at the S.J. Quinney College of Law at University of Utah.

Finally, we would note that each of these developments is linked to both the innovation objectives and the broader objective of maintaining the global intellectual capital.

5. Commercialization / Partnering

Hospitality Lab: Two projects move into sales pipeline for commercialization

As indicated in the prior report, the Hospitality Lab's 8 student teams submitted 7 patent applications in Spring Semester 2016. Two of the projects were selected as having high potential for commercial licensing to the hospitality industry. Presentations were scheduled and conducted for both. For the first invention, Window Magic, the technology was presented to Genting (the company building the new Resorts World Las Vegas on the Strip), which expressed interest in putting the invention in each of its new rooms as it builds its property. A follow-up presentation will present a feasibility study/prototype in collaboration with the UNLV College of Engineering. In addition, Window Magic will be presented to Wynn Resorts in October. The second project, Trendy, was presented to a major retailer -- also to a favorable response. A second presentation with retailer executives was scheduled for October. Consistent with the university's (and GOED's) emphasis on startups, the Trendy project team is exploring this path to building their own company. To that end, they will be collaborating with UNLV's Center for Entrepreneurship.

Gaming Innovation: Sale of IP to Genesis Gaming

The Center for Gaming Innovation is pleased to report significant commercialization successes in the last quarter. In August, Genesis Gaming Solutions, the second largest company in the table games industry, acquired intellectual property of five student table games developed in the Center for Gaming Innovation (and ultimately purchased by Big Bet Gaming). The transfer of IP included royalty payments to the student inventors and a payment to UNLV of \$5,000. The IP transfer to Genesis retains the continuing royalty sharing arrangements that were part of the original contracts with Big Bet. In addition to the five table games, Genesis Gaming has acquired the IP rights to two additional CGI innovations, *Slide to Decide* and *Color Changing Gaming Object*, in

a similarly structured deal that offers an initial payment and royalty sharing to the inventors. This arrangement presents a great opportunity to expand the exposure and commercial growth of student innovations as Genesis is a growing company with a wide distribution network.

Table 1: Industry Support for IGI received this quarter

The industry is investing in IGI in unprecedented ways, alongside GOED. This section summarizes this leveraged support.

Center / project	Amount received	For
IGI	\$60,000	Ainsworth Game Technology donated \$60,000 to establish an “Innovation Scholarship” to a fund one Graduate Assistant position over the next three years.
eSports Lab	\$750	Unrestricted donation by Mr. Les Ottolenghi, EVP and CIO of Caesar’s Entertainment Group, to fund an eSports Club for IGI’s eSports Lab to use as it explores business models, gaming platforms and eSports games.

Overall, IGI has leveraged GOED support into much larger financial investments in our successful programs in support of the Global Gaming Capital initiative. In 2015, IGI was awarded more than \$2.5 million dollars in additional funding support for its programs beyond the support received from GOED (outlined in the table below):

Table 2: External support for IGI during 2015

Center / project	Amount pledged/received	From
International Center for Gaming Regulation	\$1 million	Wynn Resorts Association of Gaming Equipment Manufacturers (AGEM) Gaming Laboratories International (GLI)
International Center for Gaming Regulation	\$1 million	Nevada State Legislature (for this biennium)
IGI	\$200,000	State of Nevada Department of Health and Human Services - Nevada Problem Gambling Project
IGI	\$400,000	Grants on business research and teaching topics

6. Intellectual Property

Gaming Innovation:

CGI filed one new provisional application for a video slot that is a twist on traditional Baccarat. This game is already in early talks for potential distribution in Asia.

7. Programmatic & Project Changes

Dr. Melissa Rorie, Assistant Professor in the UNLV Department of Criminal Justice within the UNLV Greenspun College of Public Affairs, was hired to work on the regulatory “speed to market” study. Dr. Rorie’s area of research expertise is in regulatory best practices, so she is an ideal addition to our growing team.

8. Looking Forward

In the next reporting quarter, we will report on Dr. Bo Bernhard’s keynote address at the Clubs NSW Annual Conference (equivalent to the U.S. G2E event for the Australian club market), and growing work that builds upon Governor Sandoval’s Trade Mission to Australia, which included the ground-breaking collaboration established with the University of Sydney.

In November, IGI will operate its Executive Development Program at Lake Tahoe, Nevada, which convenes industry CEOs in the industry’s premier educational event, with more than 60 “next-generation CEOs” in attendance, representing dozens of international gaming companies and governments.

The Hospitality Lab expects to move commercialization of one or two projects towards term sheets and licensing agreements. The third project will likely progress in its efforts to become a startup enterprise.

The fourth gaming innovation class is currently underway. The focus for the next quarter will be to develop strong student ideas into viable gaming products. Both Dr. Yoseloff and Dr. Sahl will be participating in panels in upcoming conferences on topics related to fostering innovation in gaming, skill-based gaming, and the gamification of hospitality space. We also anticipate significant commercialization advancement for two of the student innovations that were featured at the Innovation Lab at G2E.

The next quarter will also present numerous opportunities to continue to expand the global footprint of the International Center for Gaming Regulation.

In the area of research, the Center will work with the two researchers who have been awarded Academic Fellowships to promote the Center through their research.

There will be additional training programs in development. ICGR's Executive Director and Associate Director will during the course of October and November participate in the European eGaming Congress in Berlin, the International Masters of Gaming Law conference in Dublin and the International Association of Gaming Regulators conference in Sydney. Jennifer Roberts will also lead a panel on cybersecurity for gaming attorneys at the Nevada State Bar Gaming Law Conference.

The "speed to market" study will also continue to move forward with academic rigor and objectivity, overseen by Melissa Rorie, Ph.D., Assistant Professor in the Department of Criminal Justice within the UNLV Greenspun College of Public Affairs. Professor Rorie has been working in close collaboration with the Center's executive to develop a questionnaire and series of follow-up interview questions for distribution to and coordination with the four large manufacturers of gaming equipment; the drawing of a sample that meets academic standards; registering the project with UNLV's Institutional Research Board; finalizing non-disclosure agreements between UNLV and the manufacturers; and engaging in pre-testing of the initial research instruments. The plan is to have by November 1 the pre-testing completed, the sampling of jurisdictions finalized, and the questionnaire distributed to the manufacturers providing data.

Section II: Performance

Table 3: Progress Toward Metrics

UNLV	International Gaming Institute / Global Gaming Capital Initiative (GGC) Progress Dashboard			
	Nevada Governor's Office of ECONOMIC DEVELOPMENT KNOWLEDGE FUND <i>Empowering Success</i>			
	GOED Requested Metrics	Current Result / Year-end Target		
To 6/30/15		By 6/30/16	By 6/30/17	
Number of Companies that moved to Nevada as a result of IGI KF project	0/0	0/0	0/0	
Number of start-ups	0/0	0/0	0/1	
Number of jobs created	0/0	0/0	0/10	
Intellectual property licenses / options	0/0 ^A 5/0 ^B	0/0 ^A 1/4 ^B	0/0 ^A 2/6 ^B	
Intellectual Property Revenue Received by University	\$25,500/ 0	\$5,000/ \$20,000	\$5,000/ \$30,000	
Number of research grants awarded to (and received) the IGI research teams and faculty ^C	0/0	2/0	1/0	
Amount of research funding received by IGI research team from industry or public sector agencies	0/0	\$258,342 /0	\$139,372 /0	
Number of sponsored research contracts executed on behalf of IGI research team	0/0	2/0	1/0	
Number of patent applications filed	23/0	14/10	1/10	
Number of issued patents	0/0	0/0	0/0	
Number of students placed with companies	0/0	1/2	0/2	
Number of faculty hired	1/0	1/1	0/0	
Amount/value of gifts/donation received by UNLV in support of IGI	\$5,000/ 0	\$330,000 / \$20,000	\$60,750/ \$20,000	
Total number of student internships	1/0	3/4	4/4	

A. Number of IP licenses
 B. Number of options
 C. Excludes sponsored research and KF funding
 For the period up to 6/30/15 actual performance only has been reported for the revised metrics (targets were based on previous metrics)

Color Key	n/a or target of zero	Too early to tell	Goal not met	Close to achieving goal	Goal achieved
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Project Scorecard Narrative

Intellectual Property Revenue Received by the University

\$5,000 in royalty revenue stems from the sale of Big Bet intellectual property to Genesis Gaming (see page 10 for details).

Number of research grants awarded to (and received) by IGI research teams and faculty:

One grant: from the State of Nevada Department of Health and Human Services for the Nevada Problem Gambling Project.

Amount of research funding received by IGI research team from industry or public sector agencies:

Table 4: Breakdown of research funding received

Center / project	Amount received	For
IGI	\$139,372	State of Nevada Department of Health and Human Services - Nevada Problem Gambling Project

Number of sponsored research projects executed on behalf of IGI research team:

One (see above).

Number of patent applications filed:

CGI filed one new provisional patent application for a video slot that is a twist on traditional Baccarat this quarter. This game is already in early talks for potential distribution in Asia.

Table 5: Patent Filings this quarter

Primary Inventor	Application No.	Application Date	Type	Commercialization Status
Mingcheng Tong	62/370910	08/04/16	Provisional	Early Negotiations

Amount/value of gifts/donation received by UNLV in support of IGI:

Table 6: Breakdown of gifts/donations received this quarter

Center / project	Amount received	For
IGI	\$60,000	Ainsworth Game Technology Innovation Scholarship to fund one Graduate Assistant for three years.
eSports Lab	\$750	Donation to cover the rental expense of holding the eSports Lab class in an eSports venue – giving students an important “hands on” experience

Total number of student internships:

Four Knowledge Fund graduate students hired:

- Aron Kock
- Marta Soligo
- John Lukasik
- Shekinah Hoffman

Section III: Budget

Please see the quarterly report to the GOED Business Office.

Section IV: Monthly Logs of Global Gaming Capital Initiative Activities for Reporting Quarter

July:

IGI: Executive Director Bo Bernhard traveled to Australia on the Governor’s Trade Mission.

Strategic retreat: two-day strategic retreat for the IGI team to reflect on the successes of last year and to discuss and agree objectives for the coming year.

Regulatory Center: André Wilsenach participated in a one-day Midwest regulators seminar organized by GLI, where he spoke on the regulation of iGaming and Mobile Gaming. André also participated in the 4th Singapore Symposium on Casino Regulation and Crime where he spoke about Regulatory Enforcement and Supervision.

Gaming Innovation: negotiations with Genesis Gaming regarding sale of intellectual property.

August:

IGI: Bo Bernhard led Responsible Gaming Ambassador Training sessions in both Singapore and Macau for the Las Vegas Sands.

eSports Lab: new class developed, agreed, and marketed to students for the fall semester.

Hospitality Lab: “Trendy” app pitched to Neiman-Marcus Innovation Team.

Regulatory Center: André Wilsenach and Jennifer Roberts participated in the UNLV Boyd School of Law’s Gaming Law Conference. Jennifer Roberts coordinated a Continuing Legal Education seminar through the Nevada State Bar. Jennifer Roberts commenced instruction of the fall semester courses at UNLV William S. Boyd School of Law and the S.J. Quinney College of Law at University of Utah.

Gaming Innovation: Final recruitment of students completed for the fall semester gaming innovation class – working alongside departments across campus to attract the best and brightest students to this unique program.

September:

Much of September was focused on preparing and showcasing all of IGI’s innovation at the G2E Global Gaming Expo.

eSports Lab: the new eSports Lab class commenced with 21 students.

Hospitality Lab: Robert Rippee spoke at G2E Conference on the Integrated Resort of the Future and Robotics.

Regulatory Center: André Wilsenach contributed the introductory chapter to the 3rd Edition of the book ‘Gaming Law – European Lawyer Reference’. Jennifer Roberts authored an article on key decisions made by Nevada courts of law that affect gaming in Nevada Gaming Lawyer magazine. Regulatory Round Table at G2E.

Gaming Innovation: fall Gaming Innovation class commenced.

Section V: Appendix

Appendix 1 – Sales Pipeline

	Company Name	Company Type	Opportunity Type	Notes (Progression and Next Step)
Leads - Awareness				
	Campion Platt	Interior Designer	Product Sale/Licensing	Discussion about possible opportunities
Prospects - Interest				
	Neiman Marcus	Retailer	Product Sale/Licensing	Discussion about app for travel
	Resorts World Las Vegas/Genting	Hotels and Gaming	Product Sale/Licensing	Discussion about use of OLED screens in high end suites
	Caesars Entertainment	Hotels and Gaming	Collaboration	Discussion about CSR for eSports
	AGS	Game Distributor	Product Sale/Licensing	Discussion about next-gen game design/opportunities
	Boyd Gaming	Hotels and Gaming	Product Sale/Licensing	Discussion about deployment of student games in casino
	Caesars Entertainment	Hotels and Gaming	Collaboration	Discussion about next-gen gambling games
	DEQ	Table Game Distributor	Product Sale/Licensing	Discussions on several student table games
	Gamblit	Game Distributor	Product Sale/Licensing	Beginning discussions to review student skill-based slot games
	IGT	Game Distributor	Product Sale/Licensing	Interest in two student games
	Interblock Gaming	Game Distributor	Product Sale/Licensing	Interest in three student games
	Konami	Game Distributor	Product Sale/Licensing	Discussion about next-gen game design/opportunities.
	Scientific Games	Game Distributor	Product Sale/Licensing	Interest in distributing one student innovation
	Station Casinos	Hotels and Gaming	Product Licensing/ Development	Discussions about developing promotional apps.
Qualified - Desire				
	MGM Resorts	Hotels and Gaming	Collaboration Product Sale/Licensing	Interest in consultation/product development related to the gaming space of the future and game security
	Las Vegas Sands Corp.	Hotels and Gaming	Distribution	Interest in video gambling product.

Negotiation - Action				
	Caesars Entertainment	Hotels and Gaming	Product Licensing	Negotiation on developing national promotion
	FuelYouth	App Developer	Product Sale/Licensing	Negotiating to develop social/gambling app
	GPI	Game Apparatus Distributor	Product Licensing	Currently in discussion about licensing student patent for enhanced card shoe security.
Won or Lost				
	Big Bet Gaming	Product Sale	Student Game: Show Pai	
	Genesis Gaming Systems	Product Licensing	Student Apparatus: Slide to Decide/Color Changing Object	

Game sales in the gaming industry

Each game sold by the Center for Gaming Innovation usually includes upfront money, which can vary greatly in amount from a few thousand dollars to six figure sums. All of the sales include royalties to the inventors for each machine or table installed and generating revenue for the distributor. For example, upfront money provided to student inventors for a sale may be modest (less than \$5,000) and then, in addition, the inventors receive a 20% royalty for the gross income for each table installed (which is fairly standard when distributing table games).

All student IP developed and sold through CGI has been outright sold (sometimes the inventor retains certain rights to the patent, or the sale covers brick and mortar applications but not internet options). Big Bet Gaming LLC* has been a particularly fruitful venue for CGI's table games because they have committed (and made good on their commitment) to get every game approved for use in Nevada and to place those games in casinos.

The time to develop, patent, commercialize, and offer a game on a casino floor can be less than a year in the case of table games. A slot patent takes longer due to the increased cost and time investment needed to develop and test the game.

A successful gambling game can only generate revenue if it is popular, both with casinos and players, a process that can take years. The good news is that the number of patents being generated by CGI increases the likelihood that one or two popular games will emerge to generate a strong revenue stream for the program, to provide revenues to the game manufacturers, and to increase gaming revenue in Nevada and beyond.

For most CGI products, the sales process is surprisingly quick once the initial demonstration of the product is made. If a game generates interest, the sale may be finalized in a matter of a few months.

Additional Notes on CGI Metrics

Because of the long development cycles of gaming products, primarily due to the regulatory approval process, new games and equipment typically take one to two years from project completion to approval for use in casinos. At this point, with the financial help of Big Bet Gaming, LLC*, six program-developed games, namely: 40X Blackjack™, Casino Battle™, Flip Card™, Pai Wow Poker™, Show Pai™ and Super Three Card™ have all received approval for use in Nevada and have made their Nevada debuts. As far as the future financial success of these games, and the future revenue due to UNLV as a result, this is unpredictable. Typically, it takes up to five years for a new casino table game to gain market acceptance.

As far as the current disposition and associated technology transfer of projects created in the program, one project, Domino Dragon™, which is a new method of scoring slot machines has been acquired by Konami Gaming and is in development. The six approved table games listed above were acquired by Big Bet Gaming and modest advances were paid to the students, resulting in a small flow to UNLV. Now that these games have Nevada approval, Big Bet Gaming negotiated a resale of these games to Genesis Gaming, a global gaming equipment and distribution company. This agreement was completed in August. In addition to the six games named above, the technology transfer to this acquiring company includes two other projects; a color changing gaming apparatus and Slide to Decide™. This sale includes both some upfront payments and future payments based upon performance. Thus far, revenue to UNLV has been approximately \$35,000; however, because of the potential future income streams from these products, should they be successful, and continuing technology transfer, total revenue over time is expected to be substantially greater.

Besides the technology transfer already discussed, several students have decided to pursue future development on their own, understanding that they still have a financial obligation to UNLV for any revenue derived from their projects. Specifically:

Troy Pettie and Evan Thomas have formed Guru Games to develop Line 'em Up™, as a new style skilled-based video game, as well as a number of other games that they have in the works. They are in the process of getting funding from a Business Accelerator and should create a revenue stream for UNLV.

John Lukasik has developed Scoring Frenzy, a new house-banked fantasy sports game which appears to have great future potential.

Jeffrey Hwang, a noted author and prize winning poker player, as well as a student of the program, has founded High Variance Games to develop his unique suite of high-volatility, crossover poker/casino games.

In addition to all of these students, one student has found employment in the gaming industry; John Nguyen have been employed by Station Casinos as a direct result of his game, Show Pai, which is currently offered at the Palace Station Casino.

*Big Bet Gaming LLC was established by CGI's Executive Director Dr. Mark Yoseloff as a means of getting student-invented table games to the casino floor quickly. As the former CEO of Shuffle Master, and as the developer of several successful gambling games himself, Dr. Yoseloff is an expert in table game invention and distribution. Breaking into the gaming industry is extremely difficult, and independent inventors often find commercialization to be a formidable challenge. In order to break through this barrier, Big Bet Gaming was established as a commercial outlet that would not otherwise have been available. As Dr. Yoseloff is the Founder, established companies readily view Big Bet Gaming projects as viable opportunities for revenue. Without the company, many of the games with potential would go unnoticed or flounder on the vine. Big Bet is committed to getting the table games it purchases from students approved and on casino floors in a short amount of time. This is evidenced by the fact that within 18 months, four games have been approved for use in Nevada casinos and two of those games have actually made it to casino floors.

All CGI participants are advised both during the class (by the university's intellectual property officers) and during any negotiation with Big Bet that they are not obliged to sell their game to Big Bet, and all CGI participants continue to be exposed to opportunities with other major game developers as well. Participants are encouraged to seek independent advice from UNLV's Office of Economic Development, Boyd Law School, and/or their own personal attorney or advisor. All transactions and processes are regularly monitored by the university's intellectual property officers. This type of arrangement is not abnormal in the area of university/private collaboration in the development of intellectual property. Thanks to this mechanism, CGI has an effective and efficient means to get students' games out onto casino floors - generating revenue much faster and in greater numbers than would otherwise be possible.

Appendix 2 – Scorecard Supporting Documentation

Electronic Acknowledgement Receipt	
EFS ID:	26548968
Application Number:	62370910
International Application Number:	
Confirmation Number:	9300
Title of Invention:	9-8 Tie Baccarat
First Named Inventor/Applicant Name:	Mingcheng Tong
Customer Number:	97462
Filer:	Mark A. Litman
Filer Authorized By:	
Attorney Docket Number:	777_745USP1
Receipt Date:	04-AUG-2016
Filing Date:	
Time Stamp:	14:49:01
Application Type:	Provisional

Payment information:

Submitted with Payment	yes
Payment Type	CARD
Payment was successfully received in RAM	\$ 130
RAM confirmation Number	080516INTEFSW14504100
Deposit Account	1001
Authorized User	Mark Litman
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	