

## **Mark C. Nicely's Curriculum Vitae**

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I have been involved in casino game development and analysis since 1997, following over a decade of work in computer engineering & engineering management (hardware, software, analysis, and algorithms) whilst doing gambling analysis recreationally.

I founded and led the gaming math department for Silicon Gaming (SGIC), a highly innovative slot machine manufacturer. I met with numerous casino operators, played, analyzed and documented hundreds of games, learned insider rules-of-thumb.

In 2001, I pursued gaming consulting, with my first two clients being WagerWorks, an offshoot company of SGIC focusing on legal Internet gaming, and Fleetwood Gaming, a slot machine manufacturer. I have continued to work on a myriad of casino gaming projects including gaming analysis, game design, software simulators and emulators, random number generator software development and testing, progressive jackpot systems design and operations, general casino operations support, player complaint investigations, Class II deal generation, regulatory submissions, patent development and prosecution, innovation process development, gaming education and gaming math.

In 2005, I became an employee of IGT, the world's largest slot machine provider, after IGT acquired WagerWorks. This opened entire worlds of new knowledge and design opportunities including multi-player gaming, cross-platform gaming, advanced game performance analysis, land-based game design standards, IP portfolio review, games roadmap planning, licensing evaluation/planning, and alternate development processes. It also allowed me to become lead or co-inventor on over 200 granted patents.

In 2006, I was engaged to provide expert witness analysis and testimony on behalf of Frank Gagliardi's gambling tax case. Since then, I have been engaged over a dozen more times to provide profit/loss analysis for IRS taxation and other disputes. This is in addition to 20+ profit/loss likelihood reports for WagerWorks/IGT users/regulators.

In 2014, my position at IGT was eliminated which has allowed me to take on new game design clients for cash gaming (land-based and online) and social gaming. It has also allowed me to apply my considerable experience with gaming patent analysis and prosecution to expand my expert witness consultancy to include gaming IP, casino operations and gaming contracts, of which there have been over a dozen engagements.

## **POSITIONS HELD**

- **Expert Witness: Gambling Taxation, IP, Contracts, Ops** --- Nicely Done Defense
- **Mathematician, Programmer, Game Designer, Analyst** --- Nicely Done Gaming
- **Founder, Game Inventor, Game Developer** --- Secret Sauce Gaming
- **Gaming Designer, Manager, Distinguished Inventor** --- IGT / WagerWorks
- **Director Engineering, Product Manager** --- E.piphany / eClass Direct
- **Gaming Math Director, Product Dev. Co-Director** --- Silicon Gaming
- **Video Game Developer** --- Nicely Done Software
- **Co-Founder, VP Eng.** --- American Signal Processing
- **VP New Business; Program Manager; SW Lead** --- Imatron / Siemens
- **Project Lead, Hardware Engineer** --- Saxpy Computer
- **Hardware Engineer** --- ESL / TRW

# GAMBLING TITLES

## SKILL-BASED

### Original Design

- ◆ Danger Arena
- ◆ Nothing but Net
- ◆ Secret Temple
- ◆ Bubble Heroes (2 titles)
- ◆ Payback Pursuit

## TABLE GAMES

### Original Design

- ◆ 3 Wheel Roulette/Colour-Up
- ◆ Double/Triple Bonus Roulette
- ◆ Hot Streak BJ / Roulette
- ◆ Texas Hold'em Shootout
- ◆ Clean Sweep Baccarat

### Custom/Modified Math

- ♠ Vegas BJ (20+ Bonus)
- ♠ MultiAA-Line Baccarat
- ♠ Extra Action Baccarat
- ♠ Dragon Ties / Panda Pairs
- ♠ Deck of Dice (3 titles)
- ♠ 1P Table Pokers (5 titles)
- ♠ Win-Win Blackjack

### First-to-Market

- ♣ 21+3 Blackjack
- ♣ Double Attack Blackjack
- ♣ Power Blackjack
- ♣ Three Card Mulligan

### Ported

- Blackjack (5 generations)
- Roulette (3 generations)
- Traditional table suite:  
Baccarat; 3 Card Poker;  
Craps; Hold'em Bonus, ...

## STEPPER SLOTS

### Original Design

- ◆ 3-Reel Hold-up
- ◆ Hot Reels
- ◆ Riddle of the Sphinx
- ◆ Silver Bell

### Ported

- Double/Triple Diamond
- Five/Ten Super Times Pay
- Wipeout/Monopoly Multiplier

## CLASS II SLOTS

### Original Design

- ◆ Bank Vault
- ◆ Roman Riches

## CLASS II (cont'd)

### Custom Math

- ♠ Bayou Bucks
- ♠ Irish Gold
- ♠ Tiki Treasure
- ♠ Big Bad Wolf

## VIDEO SLOTS

### Original Design

- ◆ Banarama / " " Deluxe
- ◆ Baywatch
- ◆ D & D Fortress of Fortune
- ◆ Eureka
- ◆ MONOPOLY Pass Go
- ◆ MONOPOLY Here & Now
- ◆ The Price is Right
- ◆ Vacation USA
- ◆ Wheel of Fortune Hollywood

### Highly Modified Math

- ♠ 50K/100K Pyramid
- ♠ ELVIS the King
- ♠ Pixies of the Forest
- ♠ Super Hoot Loot
- ♠ WOF Triple Action Frenzy

### Ported

- Cleopatra / Cleopatra II
- Coyote Moon
- Garden Party
- Triple Fortune Dragon
- Wolf Run / Wild Wolf

## VIDEO POKER

### Original Design

- ◆ Press It Up Poker
- ◆ Lucky Draw Poker
- ◆ Lucky Spot Video Poker
- ◆ Match Times Pay Poker
- ◆ Turn & Burn Poker
- ◆ Poker Dice

### Custom Math

- ♠ Bump It Stud
- ♠ Dead Man's Poker
- ♠ Flippin' Poker
- ♠ Phantom Belle Bonus
- ♠ Streak It Rich Poker

### Ported

- Game King Suite
- Phantom Belle Suite
- Triple/5/10 Play Suite
- Ultimate X Poker Suite

## BINGO / KENO

### Original Bingo Design

- ◆ Everyone's a Winner
- ◆ Millionaires Jackpot

### Custom Math

- ♠ Bingo Blitz / Bingo Keno
- ♠ Hit or Miss / WTA Keno
- ♠ Krazy Keno Superball
- ♠ Montana Suite (8 titles)

## LEISURE GAMES

### Original Design

- ◆ 5-of-6 Hi-Lo (2 titles)
- ◆ MONOPOLY on a roll
- ◆ The Price is Right Fruity
- ◆ Three-2-Win (3 titles)
- ◆ Multiplier Odds

## JACKPOT GAMES

### Original Design

- ◆ Big Win
- ◆ MJP MONOPOLY
- ◆ MJP Cluedo
- ◆ WOF Red Hot Jackpots
- ◆ US Mint (stepper)

### Highly Modified Math

- ♠ Banarama Jackpot
- ♠ MJP Cleopatra
- ♠ MJP Cluedo

## JACKPOT SYSTEMS

### Original Architecture

- ◆ Silicon Gaming NV WAP
- ◆ WagerWorks online WAPs
- ◆ IGT online MegaJackpots
- ◆ IGT online Laddering MLP

## SOCIAL SLOTS

### Original Design

- ◆ PopSlots / MyVegas:  
Bet the Farm, Lucky Birds, MGM Stars, Emerald 7s, Rainbow 7s, Tavern of Fortune, Pirate Gems, Fire vs. Lightning, Wall of Khan, Diamond King, Cleo's Palace, Emeralds vs. Rubies, Enchanted Wall, Casino Heist, Fu Stacks, King Kong
- ◆ GSN: Heart of Phoenix, Multi-7s, 4x of July, Dazzling 7s, Fiery 7s, Enchanted Emeralds, Ritz Rubies, Gold & Black 10x, Lightning Wheel, Sapphires, Spicy 7s, Wild Stars & 7

All titles are trademarked owned by their respective company, including Action Gaming, Bally Gaming, Barcrest, Customized Casino Games, Deck of Dice, Diamond Game Enterprises, Elvis Presley Enterprises, Fleetwood Gaming, Freemantle Media, Games Marketing, GSN, Hasbro, High-5 Games, IGT, Olympian Gaming, PLAYSTUDIOS, Pop Slots, Nu Games, Red Emerald Gaming, Scientific Games, Secret Sauce Gaming, Seven Deuces, Silicon Gaming, ShuffleMaster, Sony, WagerWorks, Walker Digital Table Systems, Universal City Studios, and Wizards of the Coast.

# GAMBLING PATENTS

## Jackpot Systems

Dynamic Jackpot Banks	2011/0111843
Dynamic Meter Injection	8449388, 8096874
Extra Chances Jackpot	8496520, 8162746
Laddering MLP	2014/0094293
True Pay Multicurrency Jackpots	8512132

## Jackpot Game Features

Personal Progressives	8408993, 7666093
Wager-Based Symbol Eligibility	7507156

## Multiplayer Bonusing Frameworks

Cross-Title Community Bonusing	8545313 + 2 other
Garden of Gaming Delight	8662980, 8475265
Piece of The Action	2011/0230251
Treasure Map / Keno Race	8070587

## Multiplayer Features

Bees & Honey Community Bonus	8118666
Fish Frenzy Race Bonus	2011/0111827
Halo-Style Shooting Bonus	8393968
Interactive Bonus Set Selection	2014/0087809
Soldiers and Assassins	2013/0084941
Ticket-To-Ride Bonus Selector	2012/0108319

## Slot Game Formats

Chuzzle-Style Sliding Symbol	2014/0066162
Dual-Sided Cascading Symbols	2014/0087825
Hexagonal Slots	6676511, 6241607
Pin Board Driven Slot Game	8366533, 8366532
Player-Controlled Sliding Window	2014/0087832
Where's Waldo / Glyphtronic 3000	8602869, 8545307

## Slot Game Features

Hot Tail Win Trail	8678908
Per Payline Multipliers	8419525, 8277305
Regenerative Power-Ups	8672741, 8672740

## Bonus Features

3d Award Contoured Bonus	8079903
Betside: Wheel Bonus Side Bet	8628412, 8517824
Corral the Wild Horse	8517827, 8287364
Variable Depth Treasure Chest	8210935

## Video Poker Games

8-Way Poker	7862417, 7614946
Dual-Sided Video Poker	2014/0087798
Match Times Pay	2013/0260869
Phantom Belle Bonus	6196547
X-Ray Poker / Turn & Burn Poker	8210533 + 2 other

## Table Games: Blackjack

Blackjack Hot Streak	8485880, 8235780
Turn the Tables Blackjack	8197319, 8262448
Winning Streak Blackjack	2014/0087801

## Table Games: Roulette

Concentric Multi-Wheel Roulette	8517381 + 3 other
Double Bonus Spin	8152171, 7674172
Dual Streak Roulette	8562419
Hot Streak Roulette	8342941 + 3 other
Multiple Bonus Wheels Game	2013/0059647

## Table Games: Casino Hold'em

Back-A-Winner Hold 'Em	8137174
Casino Hold'em One-On-One	8353751
Casino Hold'em Shootout	7748714
Mid-Proposition Hold'em Bonus	8449363

## Table Games: Pai Gow

Pai Gow Draw Poker	8696424
Pai Gow Poker Hand Setting	8216039
Three Card Double Happiness	8177616

## Table Games: Other

Three Card Draw Poker	8695984, 8534671
Hot Streak Baccarat	2010/0117299

## Electronic Tables

Deal Customization	8678921
Electronic Dice Shaker	8622391 + 2 other
Tournament Roulette	8641515

## Mobile Devices

Mobile-EGM Interactivity	2013/0084963
Player Linked EGM Audio	2013/0053144
Remote Hand-Held Wagering	8529345

## System Features

Award Frequency Analyzer	2011/0014969
CDS-Based Bonus Persistence	2011/0003627
Crash or Carry	2013/0203482
Level-Up Plus	2014/0087855
Remote Client Selective Stacking	8668574, 8591314
Alternate Outcome Displays	2013/0079097

## Numbers/Leisure Games

3-2-Win / Match 3	8641509 + 2 other
Full Ride Poker Dice	7624986
King Arthur / 5-Of-6 Hi-Lo	7338371
Monopoly On A Roll	7828294, 7533885

Patent summary does not include all 180+ gaming patents, nor patents in supercomputing or CT scanner optimization. Does not include pre-published patents, nor patents filed or granted internationally.

# GAMBLING SPECIALTIES

## Master Level

- Progressive jackpot systems and game design
  - Co-Winner of E Gaming Review North America Best New Game 2017 Award
  - Winner of IGT 2013 Patent of the Year for online MegaJackpots system
  - Designed, implemented and launched land-based and online WAPS
- CDS (central determination system) game design
- Table game analysis and design
  - Invented, designed & built industry-leading titles: Double Bonus Spin Roulette, Triple Bonus Spin Roulette, Hot Streak Blackjack, Hold'em Shootout
- Gaming analytics
  - A/B testing & analysis for revenue optimization
  - Play history analysis for gambling loss estimation

## Expert Level

- Stepper slot design
- Video slot design
- Game & bonus features
- Keno & bingo games
- Leisure / numbers games
- Gaming IP

## SPECIFIC SKILLS

### Management Areas

- Software Engineering
  - scientific
  - interactive
  - analytic
- Game Development
  - math & design
  - graphics & audio
  - game, platform & RNG s/w
  - math validation testing
- Product Dev / Manufacturing
  - S/W, H/W, firmware
  - user & regulatory docs
  - math, physics, materials
  - supply & manufacturing

### Gaming Development

- Online gaming & casino ops
- Class III: slots & video poker
- Class II: CDS & bingo-based
- Proprietary table games
- Wide Area Progressives

### Gaming & Financial Analysis

- Casino operations
- Game performance
- Player disputes
- Tax court expert witness
- ROI, NPV, Break Even
- Business plan financials

### Product Management

- Product specifications
- Customer / Investor presentations
- Market research / CI
- Field research – customers
- Focus testing – users
- Marcom creation
- PR & Ad agency direction
- Marketing effectiveness testing

### Technical Skills

- Software
  - C, C#, C++, Java, R, APL
  - Excel w/ VBA, Sigma Plot
  - assembly / firmware
- Math
  - inferential statistics
  - probability, combinatorics
  - non-linear optimization
  - cryptography
  - software-based enumeration
- Business
  - business plans
  - licensing contracts
  - M&A due diligence
- Legal
  - patent search & analysis
  - patent specification drafting
  - expert witness reports
  - court & deposition testimony

# EDUCATION

## Rensselaer Polytechnic Institute

B.S. Computer and System Engineering; four-year academic full scholarship  
 Electrical, Computer & Systems Engineering Honors Program graduate – 1983

## Continuing Education

### Math

- Probability & Statistics UCB
- Stochastic Processes Stanford
- Applied Statistics UCB
- Fourier Transforms Stanford
- Game Theory Stanford

### Other

- Java; R; Design Patterns UCB
- C#; C++; .NET; HTML Prof
- Telecommunications Eng. UCB
- Client/Server Systems UCB
- SW Project Management Prof
- Financial Analysis I & II UCB
- Corporate Finance Prof
- Advanced Excel Prof
- Information Design Tuft
- Slot Performance Analysis UNLV

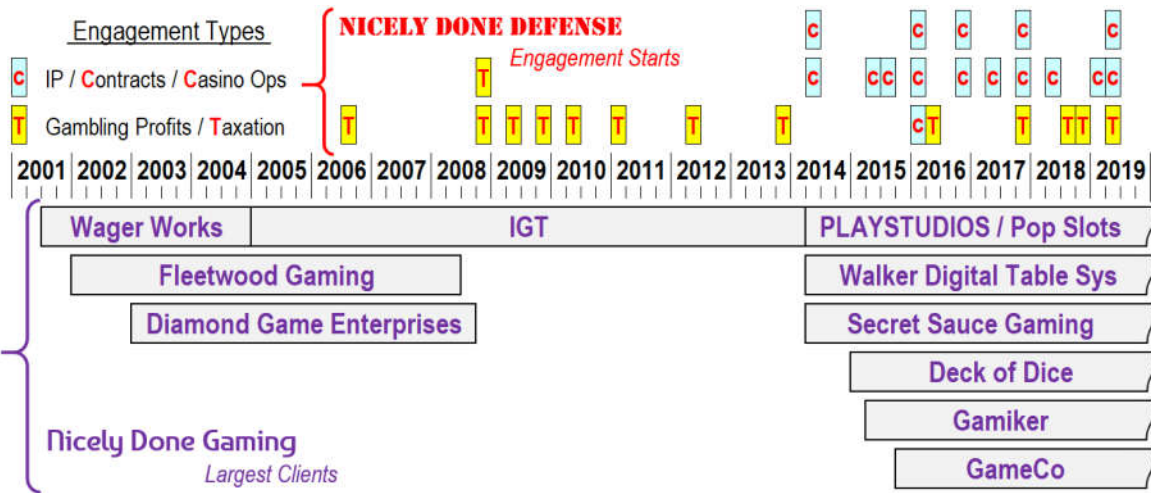
### Legal

- Intellectual Property Law UCB
- UCB Paralegal Program UCB
- Uses of Discretion in Law Oxford
- Expert Witness Training Prof

### Legend

<b>UCB</b>	UC Berkeley Extension	<b>UNLV</b>	Univ. Nevada, Las Vegas professional course
<b>Stanford</b>	Standard University graduate courses	<b>Tuft</b>	Edward Tuft training course
<b>Oxford</b>	Merton College, Oxford summer course	<b>Prof</b>	Professional training such as Seek, FEWA, PMI, ...

# DETAILED EMPLOYMENT HISTORY



## Nicely Done Gaming Largest Clients Last 5 Years

	Patent	Development	Table Games & Video Poker	Video-Reel Slot Games	Stepper-Reel Slot Games	Skill-Based Gaming	Game Econ & Meta Games	
Deck of Dice	✓✓✓	✓✓✓	✓✓✓			✓	✓✓	Feb 2015 - present
Game Co	✓✓✓	✓✓✓				✓✓✓		Nov 2015 - present
Gamiker	✓✓✓	✓✓✓	✓			✓✓		May 2015 - present
GSN / Red Emerald				✓✓	✓✓✓			May 2015 - Dec 2016
PLAYSTUDIOS			✓✓	✓✓✓	✓✓		✓	Apr 2014 - present
Secret Sauce Gaming	✓✓✓	✓✓✓	✓✓	✓		✓✓		May 2014 - present
Seven Deuces		✓	✓✓				✓✓✓	Jan 2015 - Dec 2015
Walker Digital Table Systems		✓	✓✓✓					Apr 2014 - present

**Secret Sauce Gaming, San Francisco Bay Area, CA** – 2014 to present  
(Gaming IP development for licensing and sale)

**Founder, Game Inventor / Developer**

- Develop and patent novel gaming concepts for sale or lease to the industry
- *Clean Sweep Baccarat*® patent sold to Walker Digital Table Systems Apr 2017
- *Payback Boost*™ and *Lucky Spot Video Poker*™ patents granted, prototypes in development

**Nicely Done Defense, San Francisco Bay Area, CA** – 2006 to present

(Sole Proprietorship Consulting – expert witness analysis, reports & testimony)

**Expert Witness: Gambling Profit/Taxation, IP, Contracts, Casino Operations**

- Report, joint report, and testimony for *Aristocrat v. Commissioner of Patents (AUS)*
- Testimony & report: *High-5 adv. Konami* patent infringement (MFSJ granted)
- Deposition & report for *Bally Gaming adv. Top Gun Gaming* (settled)
- Testimony & report in Gagliardi trial (new taxpayer-friendly case law established)
- Consultation & report in Sang Park trial (new taxpayer-friendly case law established)
- Analysis & reports for a dozen other clients with gambling earnings disputes

**Nicely Done Gaming, San Francisco Bay Area, CA** – 2001 to present

(Sole Proprietorship Consulting – gaming design & analysis)

**Mathematician, Programmer, Game Designer, Analyst**

Cash Gaming

**GameCo:** Nov 2015 to present: skill-based cash gaming, math, system design, regulatory

**Deck of Dice:** Feb 2015 to present: Poker Dice games, lucky-spot video poker

**Seven Deuces:** Jan 2015 to Jun 2015: math for suite of single-player poker games

**Secret Sauce Gaming:** May 2014 to present: skill-based slots; proprietary Baccarat

**Gamiker:** May 2014 to present: match-3 based game suite and corresponding IP

**Walker Digital Table Systems:** Apr 2014 to present: video and table Baccarat for Asia

Social Casino Game Development

**Deck of Dice:** Jul 2015 to present: Poker Dice apps and economy design

**Seven Deuces:** Feb 2015 to Dec 2015: social poker app economy design & analysis

**GSN:** May 2014 to Dec 2015: 3-reel stepper games, video slot games, jackpot design

**PLAYSTUDIOS:** Apr 2014 to present: slot games, blackjack, jackpot & community games

IGT – Interactive Division / WagerWorks, San Francisco, CA

Oct 2002 to Mar 2014 (part-time employee);

Oct 2001 to Oct 2002 (contractor)

Legal online casino software for the European market & land-based EGMs

- Math model development for online casino games (reels, table, cards, keno)
- Math analysis tool development, process creation & regulatory documentation
- Player complaint research and response, gaming performance analysis
- Manage all patent and trademark issues for the interactive division

Diamond Game Enterprise, Chatsworth, CA – 2003 to 2008

Class II Slot Machine Manufacturer primarily for Oklahoma

- Math model development for slot and card games
- Game design and development
- RNG development and testing
- Class II slot outcome generation software

Fleetwood Gaming, Billings, MT – 2002 to 2008

Class III Slot Machine Manufacturer for Montana

- Developed a proprietary video poker analyzer
- Proprietary keno and video poker math model design

Miscellaneous gaming clients

- Game design, math model development, card game simulators
- Patent claims development, gaming patent evaluation
- RNG testing, bankroll ruin analysis, financial modeling, etc.
- Jurisdictional regulatory review and report

**E.piphany, San Mateo, California (acquired eClass Direct)** – 1999 to 2001

**Director, Development / Product Manager**

**eClass Direct -- 25-person e-mail service business start-up**

- recruited, organized and ran the software engineering team
- established development methodologies, design & code review processes, etc.
- created and managed next-generation product & services roadmap
- executive staff duties: strategic planning, corporate policies, M&A
- corporate responsibilities: Web site, competitive intelligence, recruiting, IT

**Silicon Gaming, Palo Alto, CA** – 1997 to 1999

*(Manufacturer of Las Vegas-style multimedia slot machines, which grew to 80 employees and \$20 million in sales prior to acquisition by IGT)*

**Director, Product Development**

- co-directed game development group (24 people)
- helped design & implement new management structures & development processes
- developed a complete R&D program including new game development, industry watch, table game review, open house reviews, and outside game idea evaluation
- lead technical licensing discussions with outside gaming companies

**Director, Gaming Mathematics**

- gambling proposition design for assorted reel & card casino games
- card and reel game simulation, emulation and chi-square analysis
- created the department - staffed, trained and supervised team of 3
- responsible for all game-related IP, lead or contributory inventor on 15 patents

**Nicely Done Software, San Francisco, CA** – 1993 to 1997

**Freelance Video Game Developer**

- video game development: assembler for GameBoy, C for Sony Play Station
- game list: 5 sports, 1 platform, 2 fighting, 1 robot ball game
- lead development of 3D games for Play Station and Sega Saturn
- assorted graphics processing and software development tools in C

**American Signal Processing, San Jose, CA** – 1992 to 1996

*(Start-up pursuing DOD avionics contracts / product development)*

**Co-Founder / Vice President, Engineering**

- pursued contracts for simultaneous microwave signal detection for IFM receivers
- co-developed various DSP and analog algorithms
- developed hardware architectures and examined ASIC implementation issues

**Imatron, Inc., South San Francisco, CA** – 1989 to 1992

*(Manufactured CT scanners and other medical imaging equipment.*

*Public company with 140 employees.)*

**Vice President, New Business Development**

- coordinate definition, evaluation, projections, negotiation and finance of new business opportunities working directly with the President/CEO
- helped launch our fast heart scan service business subsidiary

**Program Manager**

*(the C-150 for Siemens replaces the previous product line with improved RAS, significant size reduction, higher resolution, and new scan modes.)*

- managed all aspects of C-150 CT scanner product development program
- **all program deadlines completed on time, to spec, under budget**
- program involved over 50 people in software, mechanical and electrical engineering, physics, marketing, clinical sciences, purchasing, field service, regulatory affairs, QC/QA, production & manufacturing integration

### **Software Project Lead**

- led 3-person project to develop electron beam control software which, performed a multi-variable, non-linear optimization during auto scanner operation to provide superior image quality – touted to customers as the most sophisticated functionality ever created by Imatron
- defined functional requirements, wrote software specifications and conventions, developed the overall design, established & tracked schedules
- 30k lines of C with embedded assembler for VME-based 68020 under UNIX
- expanded functionality of several PSOS real-time operating system processes

### **Saxpy Computer Corporation, Sunnyvale, CA – 1984 to 1988**

*(Venture capital start-up which grew to 80 employees.*

*Designed, manufactured and installed several Matrix 1 supercomputers.)*

#### **Project Lead / Hardware Engineer**

- key contributor to the design & development of the Matrix 1 supercomputer from inception to manufacturing release, customer installation, and maintenance
- lead architect & inventor of the MPU subsystem (1000 megaflop, systolic array), wrote all specs, coordinated technical details & lead the integration team
- analyzed and developed hardware for the ECL & TTL-based MPU compute and I/O controller board set (4 boards, 1000+ IC's, PAL intensive)
- developed 1000 lines of multi-staged (108 bit) microcode
- defined the system floating point arithmetic and exception handling

### **ESL/ TRW, Sunnyvale, CA – 1983 to 1984**

*(Advanced Technology Division of large defense equipment corporation.*

*Worked on a sonar-based, anti-submarine systolic array beamformer project.)*

#### **Hardware Engineer**

- developed the floating point, vector processor-based, median frequency filter board
- generated all the microcode (80 bits) for the vector processor controller
- defined and implemented the instruction set (Unix-based system)
- developed the systolic array boundary-cell square root unit
- completed a detailed numerical analysis and simulation of the inverse square root algorithm in order to optimize hardware and performance

### Mark C Nicely's Expert Witness Consulting Engagement History

ID	Client	Opposing Party	Represented By	Starting Date	Status	Issue(s)	Tasks
1	Kevin Black	United States	Rhodunda, Williams and Kondraschow, LLC	Feb-2020	ongoing	money laundering (via casino play)	strategy, education, analysis (so far)
2	Tipping Point Gaming	Caesars	Gordon Rees Scully Mansukhani, LLP	July-2019	ongoing	breach of contract, game development, game acceptance testing	strategy, analysis, report, deposition, (hearing pending)
3	Commissioner of Patents (Australia)	Aristocrat Technologies Australia	Australian Government Solicitor	Jun-2019	completed	patent validity	strategy, analysis, report, joint-report, joint-testimony
4	GameCo	(Nevada Gaming Control Board)	(direct engagement)	Jun-2019	completed	white paper proposal for tilt testing	analysis, report, conference calls with regulators
5	John Coleman	IRS	Morgan, Lewis & Bockius	May-2019	completed	gambling profit analysis, gambling taxation	strategy, analysis, report, (hearing pending)
6	Refco Group Ltd	Cantor Fitzgerald	Grant & Eisenhofer	May-2019	completed	patent ownership, breach of contract	strategy, analysis, report
7	Universal Entertainment Corporation	Aruze Gaming America	Evans Fears & Schuttert LLP; and Polsinelli PC	Mar-2019	ongoing	patent infringement	strategy, analysis (pending: report, testimony)
8	Bank of America	Maria Chavez	Severson & Werson	Dec-2018	completed	gambling profit analysis	strategy, analysis, report
9	US tax petitioner	IRS	Cantrell & Cantrell	Jul-2018	ongoing	gambling profit analysis, gambling taxation	strategy, (pending: analysis, report, testimony)
10	Erika Valenzuela	Riverside, California	Shepard Kopp Law	May-2018	completed	criminal trial, gaming machine legality	consulting expert: research, analysis, strategy
11	Amir Massihzadeh	Colorado State Lottery	Robert R. Duncan, esq; and Lewis Roca Rothgerber Christie	Nov-2017	completed	underpayment of winnings, breach of contract	strategy, analysis, appeals court prep
12	US tax petitioner	IRS	Barnes Law Firm	Oct-2017	completed	gambling profit analysis, gambling taxation	analysis, report

ID	Client	Opposing Party	Represented By	Starting Date	Status	Issue(s)	Tasks
13	John Kurey	Harrah's Resort	Jacobs & Barbone, P.A.	Oct-2017	ongoing	underpayment of winnings; breach of contract; fraud	strategy, analysis, report, deposition
14	Daniel Brna, <i>et. al.</i>	Isle of Capri Casinos, Interblock USA	Kelly Uustal	Jun-2017	completed	underpayment of winnings, breach of contract	testing, analysis, report
15	High5 Gaming	Daniel Marks <i>et. al.</i>	Finnegan, Henderson, Farabow, Garrett & Dunner	Nov-2016	completed	patent infringement, breach of contract trade secret misappropriation	strategy, analysis, IPR support, report, claim construction
16	Affiliated Health Group <i>et. al.</i>	Grand Victoria Casino; Irina Nakhish, <i>et. al.</i>	James Zeas, esq	Nov-2016	completed	embezzlement; forensic accounting	strategy, analysis
17	High5 Gaming	Konami	Holland & Hart	Jun-2016	completed	patent infringement, patent validity	analysis, report, deposition, claim construction, Markman hearing, summary judgement testimony
18	Town Pump	Fleetwood Gaming	(direct engagement)	Mar-2016	completed	casino loss analysis	analysis, internal report
19	GameCo	(NJ Dept. Gaming Enforcement)	(direct engagement)	Feb-2016	completed	white paper proposal for skill- based gaming	analysis, report, conference calls with regulators
20	Gamiker	(USPTO)	Kleiner Perkins	Feb-2016	completed	2 utility patents (skill-based gaming)	invention, co-invention, patent strategy, initial drafting, prosecution assistance
21	GameCo	(USPTO)	Wilson Sonsini	Jan-2016	completed	utility patent (skill-based gaming)	co-invention, patent strategy, initial drafting, prosecution assistance
22	Secret Sauce Gaming	(USPTO)	Newman Law	Sep-2015	completed	utility patent (video baccarat)	invention, patent strategy, initial drafting, prosecution assistance
23	Deck of Dice	(USPTO)	Newman Law, Weide & Miller	Jun-2015	completed	2 utility patents (dice-based gaming)	invention, co-invention, patent strategy, initial drafting, prosecution assistance
24	Bally Gaming	Top Gun Gaming	Pisanelli Bice	Jun-2014	completed	breach of contract, IP licensing	analysis, report, deposition

ID	Client	Opposing Party	Represented By	Starting Date	Status	Issue(s)	Tasks
25	Secret Sauce Gaming	(USPTO)	Newman Law	May-2014	completed	utility patent (skill-based gaming)	invention, patent strategy, initial drafting, prosecution assistance
26	Sang Park	IRS	McDevitt & Pribyl, APLC	Nov-2013	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
27	US tax petitioner	IRS	Rachel Dodge CPA	May-2012	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
28	Town Pump	(Montana Gaming Control Division)	(direct engagement)	May-2011	completed	gambling profit analysis, gambling taxation	regulatory white-paper on bonusing
29	US tax petitioner	IRS	Laurie A. Laws, esq	Jan-2011	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
30	US tax petitioner	IRS	Sonnenschein Nath & Rosenthal	May-2010	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
31	US tax petitioner	IRS	Snell & Wilmer	Jun-2009	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
32	US tax petitioner	IRS	Thomas J. Dwyer & Associates	Oct-2009	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
33	US tax petitioner	IRS	Ron Inouye, CPA	Nov-2008	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
34	US tax petitioner	IRS	Holtz, Slavett & Drabkin	Nov-2008	completed	gambling profit analysis, gambling taxation	strategy, analysis, report
35	Francis M. Gagliardi	IRS	Procopio, Cory, Hargreaves & Savitch	Aug-2006	completed	gambling profit analysis, gambling taxation	analysis, report, testimony

Family ID	# Cites to	Patent Title	Granted Patent(s)
#1	201 cites	Non-rectangular and/or non-orthogonal arrangement of gambling elements in a gaming apparatus	6241607 6676511
#2	161 cites	Gaming method and device involving progressive wagers	7666093 8408993 8801520 9202338
#3	154 cites	Gaming device providing an award based on a count of outcomes which meets a condition	8002620 8414379 8388437 8641509 9082262 9679441
#4	144 cites	Play strategy for a computer opponent in a electronic card game	6196547
#5	127 cites	Gaming system, gaming device and method for providing a strategy game having a plurality of awards	8393968 9196129
#6	115 cites	Gaming system and method providing a card game associated with a supplemental pool funded upon an occurrence of a designated outcome and winnable by a player or a dealer	9129486
#7	113 cites	Gaming system and method providing a bonus opportunity when a designated relationship exists between a plurality of randomly determined elements	9881460
#8	98 cites	Interactive streak game	7867080
#9	95 cites	Gaming system including a gaming table and a plurality of user input devices	9129473 9640027 10249131
#10	95 cites	Gaming system including a gaming table with mobile user input devices	8529345
#11	83 cites	Casino card game	7748714
#12	81 cites	Gaming device having a rotor-based game with a bonus opportunity	7533885
#13	81 cites	Gaming system having a dice-based game with a plurality of wager areas	7828294
#14	78 cites	Rotor-based gaming device having a system for changing the quantity of potential game outcomes for subsequent plays	7708630 8177234
#15	77 cites	Gaming system, gaming device, and method providing modifiers for symbol display areas	8678908
#16	75 cites	Rotor-based gaming device having a secondary award system	8221214 8342941 9437079 9911281

Family ID	# Cites to	Patent Title (continued)	Granted Patent(s)
#17	75 cites	Gaming device having a wheel-based game	7674172 8152171
#18	61 cites	Card game system and device having supplemental awards based on consecutive non-terminating outcomes	8235780 8485880 8790173 9489806
#19	59 cites	Gaming device providing an opportunity to receive awards which vary with different non-max bets	7507156
#20	50 cites	Gaming system, gaming device, and method providing poker game with awards based on odds of winning	8449363 9230405 9773375
#21	48 cites	Card game enabling separate evaluations for multiple game outcome combinations	7614946 7862417
#22	46 cites	Gaming system and method having progressive awards with meter increase events	8096874 8449388 10311674
#23	44 cites	Gaming system, device and method involving a plurality of rotors interchangeably operable in a decoupled mode and a coupled mode	7850171 8006978 8226085 8517381
#24	44 cites	Gaming device and method for providing a free spin game with payline multipliers	8277305 8419525 8740691
#25	44 cites	High low series gambling game	7338371
#26	42 cites	Gaming system and method providing a multiplayer bonus game having a plurality of award opportunities	8070587
#27	39 cites	Gaming system, gaming device and method for providing draw poker game	7993191 8210532 8210533 8534671 8695984
#28	37 cites	Gaming device and method for providing multiple-hand poker game	8353751
#29	36 cites	Gaming system and method for dynamically grouping gaming devices to provide progressive awards	8968083 9336654 10068430
#30	36 cites	Gaming system, gaming device and method including a community game	9905083 8888580 9430915
#31	33 cites	Gaming system, gaming device, and method for providing a game in which a player collects emblems by positioning accumulators in a field	8287364 8517827 9011229
#32	32 cites	Gaming system and method configured to change the odds of a player obtaining a winning game outcome or a designated game outcome for a play of a game without changing the paytable of the game	8162746 8496520

Family ID	# Cites to	Patent Title (continued)	Granted Patent(s)
#33	30 cites	Gaming system, gaming device and method of providing selection game with interdependent award distribution	8079903 8758117
#34	30 cites	Central determination gaming system and method for providing a persistence game with predetermined game outcomes	9569932
#35	29 cites	Gaming system, gaming device, and method for providing a game in which players position selectors within a field of selections based on values masked by the selections	9495826
#36	28 cites	Gaming system, gaming device, and method providing multiple hand card game	9659440 8137174 8727851
#37	27 cites	Gaming system, gaming devices, and method for providing an enhanced multiple-player bonus redemption game	8118666 9142088
#38	27 cites	Gaming system and method providing a multi-player bonus game	9214068
#39	27 cites	Video game gaming system	9530282
#40	26 cites	Gaming system and method for providing automated casino-style table tournaments	8641515
#41	25 cites	Gaming system and method for providing improved element setting options	8216039 8795049 8795050
#42	25 cites	Gaming system, method and device including player/dealer role reversal for modified blackjack game	8262448 9401075
#43	23 cites	Method of conducting wagering dice games	7624986
#44	22 cites	Gaming system and method for permanently increasing the average expected payback percentage of a game for a player	9524614 10096208
#45	21 cites	Architecture for block processing computer system	4839801
#46	21 cites	Gaming system, gaming device and method of providing collectors and tokens associated with collectors	8210935
#47	18 cites	Self-contained dice shaker system	8079593 8376362 8622391
#48	16 cites	Gaming system and method providing a multiple-player bonus redemption game	9792759 8651947 9189919

Family ID	# Cites to	Patent Title (continued)	Granted Patent(s)
#49	16 cites	Tuning the scanning electron beam computed tomography scanner	5224137
#50	14 cites	Gaming system, gaming device and method for utilizing mobile devices at a gaming establishment	9524609 9824536
#51	14 cites	Gaming system, gaming device, and method for side wagering on occurrences of bonus events	8517824
#52	13 cites	Gaming system, gaming device, and method providing a game with multi-component symbols and awards based on common components	8545307 8602869 9053613
#53	11 cites	Gaming system and method for providing a symbol matrix with a moveable symbol display window	9177447 9202345 9430900 9852574 10102711
#54	10 cites	Multizone array processor implementing two sided zone buffers with each side being dynamically configured as a working or I/O side	4860249
#55	8 cites	Gaming system and method for providing a persistent game	9905080 9214067
#56	8 cites	Gaming system, gaming device, and method providing selectable different roulette wheels for play of roulette game	8986106 9005004
#57	8 cites	Gaming system, gaming device and method for providing a multiple player persistent game	9466183
#58	8 cites	Universally compliant multi-currency progressive jackpot system	8512132
#59	7 cites	State-based power-ups	8672740 8672741 8721426 8753187 8777726 8821252
#60	7 cites	Gaming system, gaming device and method for providing a multiple player, multiple game bonusing environment	8491381 8517818 8545313 8790177 8986107
#61	7 cites	Gaming system and method providing a slot game employing a randomly selected set of reels	8840457 9218710 9530273 10096201
#62	7 cites	Gaming system, gaming device, and method for providing a multiple player persistent game	8475265 8662980 8905831
#63	7 cites	Gaming system, device, and method providing a multiple streak game	8562419 8986104
#64	7 cites	Gaming system and method providing a server that determines reel sets for subsequent game plays	8968073

Family ID	# Cites to	Patent Title (continued)	Granted Patent(s)
#65	6 cites	Gaming system, gaming device, and method for side wagering on bonus event outcomes generated in bonus events	8628412 8986108
#66	5 cites	Gaming system and method for providing a cascading symbol game with interacting symbols	9418518 9472065
#67	5 cites	Gaming system and method providing a community selection game providing bonus game selection	9082257 10096199
#68	5 cites	Gaming system and method for providing a streaming symbols game	9514601
#69	5 cites	Gaming system and method providing a multiplay slot game including a cascading symbols feature in which symbols are removed from corresponding symbol display areas of different sets of symbol display areas	8870642
#70	5 cites	Method and system for player linked audio	8821266
#71	4 cites	Gaming system, gaming device, and method providing one or more alternative wager propositions if a credit balance is less than a designated wager amount	8801519 9466174 9881450
#72	4 cites	Gaming system and method for providing a cascading symbol game with shifting symbols between multiple symbol display position matrices	9355528 9905073
#73	4 cites	Award frequency analysis (AFA) security auditor	9147306
#74	4 cites	Gaming system and method providing a selection game associated with a plurality of different sets of pickable selections	9449467
#75	4 cites	Gaming system, gaming device and method for providing a multiple player, multiple game bonusing environment with a multiple player coin drop game	9514605
#76	3 cites	Gaming system and method for providing a cascading symbol game with multiple symbol display position elements	9275524 10055944
#77	3 cites	Gaming system and method for providing a cascading symbol game with upgrade events	9349251 9449465
#78	3 cites	Gaming system and method for providing a multiple sided card game	9472063 9530284
#79	3 cites	Gaming system and method providing a multiplayer Pai Gow draw poker game	8696424
#80	3 cites	Gaming system and method providing a server that determines a reel set for an initial game play and reel sets for subsequent game plays	8591314

Family ID	# Cites to	Patent Title (continued)	Granted Patent(s)
#81	3 cites	Gaming system and method providing a user device that receives and stores reel sets for subsequent game plays	8827798
#82	3 cites	Gaming system, gaming device, and method providing player-selectable card dealing attributes	8678921
#83	2 cites	Gaming system and method for providing a cascading symbol game with shifting symbols in different directions between multiple symbol display position matrices	9460587 9640039
#84	2 cites	Gaming system, gaming device, and method providing an obstacle board slot game	8366532 8366533
#85	2 cites	Facilitation of gaming event re-creation	9257013
#86	2 cites	Gaming system and method providing a Pai Gow draw poker game	8672736
#87	2 cites	Gaming system and method providing game with multiple award displays	9659430
#88	2 cites	Gaming system, gaming device, and method for displaying indications of awards that could have been won	8784183
#89	1 cites	Gaming system, gaming device, and method providing a game having an obstacle board with falling symbols	9449464 9792773
#90	1 cites	Gaming system and method providing a user device that receives and stores a reel set for an initial game play and reel sets for subsequent game plays	8668574
#91	0 cites	Central player control for facilitation of gaming event re-creation	9286755
#92	0 cites	Customization of gaming event re-creation	9443381
#93	0 cites	Input/output overlays for facilitation of gaming event re-creation	9257005
#94	0 cites	Skill-based wagering gaming systems and methods	10147263
#95	0 cites	System data triggering for facilitation of gaming event re-creation	9514602
#96	0 cites	Video game gaming system	9865138

Family ID	# Cites to	Patent Title (continued)	Patent Application
#97	58 cites	Cross-enterprise gaming server	20040152511
#98	51 cites	Gaming system and method providing a multiple-player bonus redemption game	20090124327
#99	30 cites	Device and method for supporting wagering systems in games of chance	20040185933
#100	21 cites	Gaming system, device and method involving a role-based game and side game	20100117299
#101	9 cites	Device and method for a dynamically configurable user interface in a game of chance	20060252542
#102	8 cites	Gaming system and method for providing a symbol game with upgrade events	20170004674
#103	7 cites	Revealed indicia game method and device	20040242300
#104	5 cites	Gaming system, gaming device, and method for providing a persistent game	20130079108
#105	4 cites	Multi-stake, multi-level progressive with overlapping eligibility bands	20140094293
#106	2 cites	Gaming system and method for providing a cascading multiple sided symbol game	20140087825
#107	2 cites	Method and device for conducting a game with multi-threshold award	20050124404
#108	2 cites	System, device and method for providing an interactive gambling game	20160110943
#109	0 cites	System, method, and device for providing a game awarding prizes accord	20170092063