

David Crane

Curriculum Vitae

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PROFESSIONAL EXPERIENCE

- January, 2011 to present **EXPERT CONSULTANT, SGK SERVICE INC.**
Performing expert witness consulting services, marketed through SGK.
- January, 2011 to September, 2012 **SENIOR DIRECTOR, SPECIAL PRODUCTS, VIACOM / MTV NETWORKS / NICKELODEON.**
Publisher of online and mobile games.
- October, 2009 to January, 2011 **FOUNDER AND CHIEF TECHNOLOGY OFFICER, APPSTAR GAMES, INC.**
Technology start-up involved in the development of an iOS technology base to allow for rapid deployment of games to the iPhone and iPad.
- November, 1995 to September, 2009 **FOUNDER AND CHIEF TECHNOLOGY OFFICER, SKYWORKS INTERACTIVE, INC.**
Game publisher: Advergaming, casual online, and iPhone / iPad mobile.
- December, 1988 to September, 1995 **VICE PRESIDENT, ADVANCED RESEARCH AND DEVELOPMENT, ABSOLUTE ENTERTAINMENT.** Developer and publisher of console video games.
- September, 1987 to December, 1988 **DIRECTOR OF TECHNOLOGY, HASBRO ELECTRONICS.** Developed the first consumer Interactive Video Player (known as the Nemo or Isix device).
- October, 1979 to April, 1987 **FOUNDER AND SENIOR GAME DESIGNER, ACTIVISION INC.** Founder of the first third-party video game cartridge publisher. Built a product line which took the company from start-up to over \$200 million in three years.
- September, 1977 to September, 1979 **VIDEO GAME DESIGNER, ATARI INC.** Designed early video game cartridges for Atari's 2600 Video Computer System. Accounted for \$15 million of the company's 1978 revenues.
- June, 1975 to September, 1977 **ASSOCIATE ENGINEER, NATIONAL SEMICONDUCTOR.** Linear Integrated Circuit design group developing analog and analog to digital circuits.

EDUCATION

DEVRY INSTITUTE OF TECHNOLOGY, PHOENIX. Graduated June 1975 with BSEET. Completed 4 year degree in 33 months through advancement testing.

PROFESSIONAL ACHIEVEMENT SUMMARY

- 1975 to Present
- 35+ years of experience in video game hardware and software design
 - Designed or co-designed more than 90 entertainment products.
 - Product revenues in excess of \$400 million retail.
 - Dozens of industry awards, including Designer of the Year, Parent's Choice, and prestigious 2003 Game Developer Choice Award for contribution to the field.
 - Recipient of the inaugural AIAS Pioneer Award.
 - Several games with unit sales over 1,000,000.
 - Profiled in national press, including Forbes and Newsweek.
 - Pitfall! game was so popular that it spawned a Saturday morning cartoon show.
 - Produced hit products with sales throughout the US, Europe, and Japan.
 - Author of US Patent #4,644,495 for an improved Video Memory System.
 - Appeared in multiple volumes of *Who's Who in Consumer Electronics*.

ACTIVE EXPERT CONSULTING CASES

April, 2015 (active)	WHITE KNUCKLE IP, LLC v. ELECTRONIC ARTS, INC. Duane Morris LLP Testifying Expert for Defendant EA re Patent Assertions
January, 2015 (active)	RMDI LLC v. SCEA LLC Quarles & Brady, LLP Testifying Expert for Defendant SCEA re Patent Assertions
September, 2014 (active)	IPLearn-FOCUS v. MICROSOFT Tensegrity Law Group, LLP Testifying Expert for Plaintiff IPLearn-Focus re Patent Assertions

CLOSED EXPERT CONSULTING CASES

2015

Game Dev.: 10 Vox Entertainment v. Frima Studios, Inc.	Winderweedle, Haines, Ward, ..., PA
Patent Assertion: Recognicorp v. Nintendo	Farney Daniels PC
Code Analysis: Cinsay, Inc. v. Joyus, Inc. Brightcove, Inc.	Munck Wilson Mandala, LLP

2013

Patent: Babbage Holdings, LLC v. SCEA LLC	Duane Morris LLP
Patent Prosecution: Scribd, Inc.	Derwin & Siegel LLP
Technology Expert: PMC, LLC v. Zynga	Jones Day
Technology Expert: Conty & Reichman v. Jakks Pacific	Feder Kaszovitz LLP

2012

Patent: Gametek LLC v. Facebook, et al.	Gibson, Dunn & Crutcher
Patent and Prior Art Research: Lexos Media v. Zynga	Durie Tangri
Patent: Walker Digital, LLC v. Activision Blizzard, et al	Duane Morris LLP / K&L Gates LLP
Patent: Walker Digital, LLC v. Microsoft, et al	Duane Morris LLP / K&L Gates LLP
Walker Digital v. Capcom Entertainment Inc., et al	Duane Morris LLP / Gibson, Dunn
Patent: Shinsedai v. Nintendo	Hagens Berman LLP, Mintz Levin

2011

Patent: HTC Corporation v. Apple Inc	Fish & Richardson P.C.
Patent: Oasis Research LLC v. Oracle Corporation	Kirkland & Ellis LLP
Game Copyright: Miller v. Facebook	Orrick, Herrington & Sutcliffe LLP
Computer Security: Datel Holdings Ltd. v. Microsoft	Howard Rice ... Falk & Rabkin

Pre-2011

Patent Research: Netjumper Software, LLC v. Google	Sommers, Schwartz, P.C.
Patent Workaround Engineering: AOL Time Warner	Derwin & Siegel LLP

SELECTED INDUSTRY AWARDS

2010 Academy of Interactive Arts and Sciences Pioneer Award

At the 13th Annual Interactive Achievement Awards held on February 18, 2010 Activision co-founder David Crane was presented with the Academy's first ever Pioneer Award, celebrating his contribution to the creation of the Video Game Industry.

2009 IGN.COM "The Top 100 Game Creators of All Time"

In 2009 IGN.COM ran a feature called "The Top 100 Game Creators of All Time." David Crane was featured at #12.

2003 Game Developers Choice "First Penguin Award"

"The IGDA's First Penguin award celebrates the courage and bravery of a developer who is the first to test the proverbial waters, in the face of uncertainty of success or failure. Receiving a "penguin" serves as an inspiration and lesson to the community."

1990 Parent's Choice Award, A Boy and His Blob

1989 Video Games and Computer Entertainment, Best Strategy Game, A Boy and His Blob

1989 Video Games and Computer Entertainment, Most Innovative Game, A Boy and His Blob

1983 Video Games Magazine, Player's Choice Award, Pitfall!

1982 VIRA Award, Video Game Designer of the Year

1982 Video Game Update, Designer of the Year

1981 Best Audio and Visual Effects, Fishing Derby

PROFESSIONAL ASSOCIATIONS

Academy of Interactive Arts and Sciences (AIAS), Member and Pioneer Award recipient

Dedicated to promoting awareness of the art and science of interactive games and entertainment.

International Game Developer's Association (IGDA), Member

To promote the growth of our industry and the growth of creative endeavors;
To ensure a professional standard of workplace environment for all development;
To publicly establish and communicate our standards as media professionals.

Videogame History Museum, Founding Board Member

A non-profit charity formed to preserve and archive the history of the video game industry.

TECHNICAL EXPERTISE

David Crane is an accomplished electronic engineer with experience in *Hardware Design* in the fields of *Analog Circuitry*, *Digital Circuitry*, *Semiconductor Design*, *Computer Architecture*, and *Circuit Layout*. This expertise in Hardware Design led into a world-class career in *Video Game Design*, *Engineering*, and *Programming*.

Such a combination of training and experience results in expertise in the analysis of *Electronic Hardware* (with an emphasis in Video Systems), *Reverse Engineering* of hardware/software systems, *Game Copyright Issues*, *Patent Analysis*, and *Source Code Analysis* of code written in any of *26 Computer Languages*.

Expertise specific to the Video Game Industry includes an intimate knowledge of the *Hardware*, *Video Systems*, *Memory Maps*, *Controllers*, *Multi-player systems*, and *Programming Techniques* found in *More than 25 Video Game Consoles and Platforms*.

MAINFRAME COMPUTER LANGUAGES:

FORTRAN
RPG
COBOL
BASIC

MICROPROCESSOR ASSEMBLY LANGUAGES:

6502
INTEL 8080
NATIONAL SEMICONDUCTOR PACE 16 BIT
NATIONAL SEMICONDUCTOR SC/MP 8 BIT
GI-1610
ZILOG Z80
65816
INTEL 8048
8086, 80286

MICROPROCESSOR PROGRAMMING LANGUAGES:

C
C++
OBJECTIVE C
J2ME
BREW

MICROCONTROLLER ASSEMBLY LANGUAGES:

NEC MICROCONTROLLER ASSEMBLY LANGUAGE

SCRIPTING LANGUAGES:

LINGO
ACTIONSRIPT
LUA
JAVASCRIPT
HTML, HTML-5

ENGINEERING LANGUAGES:

SPICE
VHDL

VIDEO GAME CONSOLES AND PLATFORMS:

ATARI 2600
ATARI 5200
ATARI 7800

ATARI 400
ATARI 800

MAGNAVOX ODYSSEY II

MATTEL INTELLIVISION

COLECOVISION

APPLE II
MS-DOS

COMMODORE C64
COMMODORE C128

NINTENDO NES
NINTENDO SNES
NINTENDO GAME BOY
NINTENDO DS

SEGA MASTER SYSTEM
SEGA GENESIS
SEGA CD

SONY PLAYSTATION

MICROSOFT XBOX
MICROSOFT XBOX 360

NOKIA SERIES 60 FEATURE PHONES
LG VX4400
LG VX6000

APPLE IPHONE
APPLE IPOD TOUCH
APPLE IPAD

PUBLISHED PRODUCTS

IPHONE PUBLICATIONS:

ARCADE BOWLING™
TEN PIN CHAMPIONSHIP BOWLING®
BOARDWALK GAMES™
ARCADE HOOPS BASKETBALL™
3 POINT HOOPS®
ARCADE QB PASS ATTACK™
FIELD GOAL FRENZY™
STELLAR BLAST!™
2600 MAGIC
DRAGSTER MAGIC

CONSOLE GAMES:

PITFALL!™
PITFALL II, LOST CAVERNS™
FREEWAY™
LASER BLAST™
FISHING DERBY™
DRAGSTER™
GRAND PRIX™
A BOY AND HIS BLOB™
THE RESCUE OF PRINCESS BLOBBETTE™
LITTLE COMPUTER PEOPLE™
GHOSTBUSTERS™
SKATEBOARDIN'™
SUPER SKATEBOARDIN'™
THE ACTIVISION DECATHLON™
T*O*Y*S™
HOME IMPROVEMENT: POWER TOOL PURSUIT
TRANSFORMERS®, THE COMPUTER GAME
DAVID CRANE'S AMAZING TENNIS™
BART SIMPSON'S ESCAPE FROM CAMP DEADLY™
MARCH OF THE PENGUINS™
CHOMP™
CANYON BOMBER™
OUTLAW™
SLOT MACHINE™

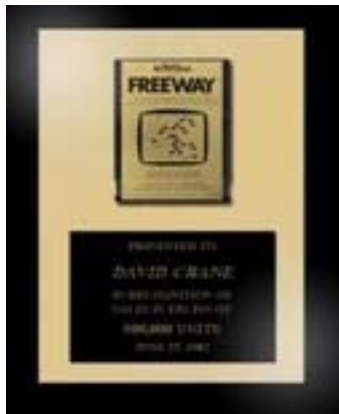
PATENT:

US PATENT #4,644,495 2/17/87
"VIDEO MEMORY SYSTEM"
ASSIGNED TO ACTIVISION, INC.

ONLINE CASUAL GAMES:

LOTTO LETTERS®
SUPER SWISH
STELLAR BLAST!™
MERCURY® MARINER® HYBRID INFOMERCIAL
LACROSSE SHOOTOUT
BEACH VOLLEYBALL
SPIDERMAN® CLIMBING GAME
MILLER® SEAT SALSA *
SUPER COCOA MAN
BREAK THE RULES HOOPS
DOWNFIELD STRIKE
MINI MOTOCROSS
PEBBLES® ROBOPUP RUN
TOYOTA® 4RUNNER® CHALLENGE
TYCO® RC SPEED WRENCH
VERTICAL JAM
E.T.'s ADVENTURE
BUBBLE YUM® HOME RUN DERBY
BUBBLE YUM® BULLPEN BLAST
GUMMI BUNNIES® EGG HUNT
FOUL SHOT SHOOTOUT
LIFE SAVERS® WATER PARK PINBALL
FIELD GOAL CHALLENGE
CREME SAVERS® BOWLING
GOLF SOLITAIRE
SKYWORKS LANES BOWLING
CAREFREE® ON ICE
GUMMI SAVERS® ROCK-N-SKATE
YIPES!® PHOTO SAFARI
ICE BREAKERS® SLAP SHOT SHOOTOUT
SOUTHPARK® PINBALL
BREATH SAVERS® ROAD RALLY
FORD® NASCAR® RACING CHALLENGE
MTV® CRANKS DIRT BIKE GAME
ICE BREAKERS® ULTIMATE BOBSLED
BREATH SAVERS® BILLIARDS
SNACKWELLS® CHOCOLATE FACTORY PINBALL
SNOWBOARD BIG AIR
SKATE RAGE INLINE SKATING
CANDYSTAND™ MINIATURE GOLF
LIFE SAVERS® WORD CHALLENGE
CANDYSTAND™ TENNIS OPEN
MOUNTAIN CLIMBING
3 POINT SHOOTOUT
GRAND SLAM PINBALL
NABISCO WORLD™ TEAM RACING
SOCCER SHOOTOUT
LIFE SAVERS® TREASURE HUNT
OREO® ADVENTURE
LIFE SAVERS® ROLL-A-BALL
AIR CRISPS® SLAM DUNK
FRUIT CHEWS® BMX
POSTOPIA™ BOWLING

SALES AWARDS:



1982 Freeway Gold Cartridge Award, In Recognition of Sales in Excess of 500,000 Units



1982 Grand Prix Gold Cartridge Award, In Recognition of Sales in Excess of 500,000 Units



1982 Pitfall! Gold Cartridge Award, In Recognition of Sales in Excess of 500,000 Units



1982 Freeway Platinum Cartridge Award, In Recognition of Sales in Excess of 1,000,000 Units



1982 Laser Blast Platinum Cartridge Award, In Recognition of Sales in Excess of 1,000,000 Units



1982 Pitfall! Platinum Cartridge Award, In Recognition of Sales in Excess of 1,000,000 Units