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Patent Litigation in the Games Space

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I am not an attorney but a professor of engineering practice who has a large amount of experience in the patent litigation space as an expert witness in the game and computing industry domains. This column covers my understanding of patents and some of my experiences as an expert witness.

into a patent without asking us very many questions, and, the next thing we knew, we had two shiny issued patents, and the school sent us each US\$700 for our efforts. We were happy as pigs in whatever pigs wallow in. . . . Later, the Research Office of the NPS received an inquiry from a company, PNI Sensors, that

he first time I filed a patent was as a coinventor with one of my former students at the Naval Postgraduate School (NPS) and the other professors/ engineers involved in the research—that patent turned into two patents, both entitled "Method and Apparatus for Motion Tracking of an Articulated Rigid Body," patents 6,820,025 and 7,089,148. We had designed a nine-axis tracker for tracking the orientation of limb segments of the body without the problem of gimbal lock. We turned in a tech report to the university counsel of the NPS, and that attorney took our tech report and turned it

Digital Object Identifier 10.1109/MC.2022.3198197 Date of current version: 24 October 2022 wanted to license that patent to create a microelectromechanical systems part for the Nintendo Wii U. This went all the way to the Secretary of the Navy for approval, and the next thing I knew was that the NPS Research Office was asking for my bank account information so they could deposit my part of the royalty stream. The pig-o-meter went to 11. . . . The only problem was that none of us on that team really knew how to write patents so we could write more. . . .

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Now, I think I know how to, under attorney supervision, write patents, how to blow up patents, how to defend patents, how to compute damages, how to license patents, and a whole bunch of other skills not normally found inside of a university professor. I am going to try and provide EDITOR MICHAEL ZYDA University of Southern California; zyda@usc.edu

you the education I did not have back last century that maybe I know now.

WHAT IS A PATENT?

If you type the search query, "What is a patent?" into Google, you get the following: "a government authority or license conferring a right or title for a set period, especially the sole right, to exclude others from making, using, or selling an invention."²

We also need to go back in history to see why we have a patent system:

"The American patent system was founded by the act of April 10, 1790, the bill being inspired and urged by Thomas Jefferson (TJ), then Secretary of State, who had seen during his residence abroad the encouragement and protection extended by other countries to inventive skill and industry, and the exclusive privileges that were granted to the producing of things new and useful in art, science, literature and mechanics."³

Thus, we have a patent system to provide protection for inventive skill and industry with exclusive licensing privileges for producing new products from the patented technology. TJ was the first head of the patent office and, additionally, an inventor and patent examiner.⁹ TJ was thinking that a patent system

DISCLAIMER

This material originates from a continuing legal education course I created for the Los Angeles County Bar Association on "Games and the Law," 26 March 2019, mostly focusing on patent litigation and games, but some of it was on licensing intellectual property (IP). IP licensing is not discussed here. would encourage the creation of new inventions and technologies and make the country a better place. Maybe. The patent system is what it is based on its historical foundations. If applied properly, licensing fees will be acquired by inventors so they can invent additional technologies and better their lives. This is not always what happens.

WHY WRITE/FILE PATENTS?

If you are working in the games industry or are a professor who creates new

Fire sale

If your company runs out of funds and totters on bankruptcy, then having a collection of patents or an essential patent that you can sell is useful for some quick cash. Even if your company is doing fine, it might want to sell patents, especially if they are in technical areas that are no longer core to the company.¹ You might even be able to sell your patent to a nonpracticing entity (NPE) for a share of any proceeds from litigation.

TJ was thinking that a patent system would encourage the creation of new inventions and technologies and make the country a better place.

technologies for the games industry, there are multiple reasons to write and file patents.

Start-up

If you have a start-up that created this patent, then filing and prosecuting that patent provides IP protection for the core idea behind your start-up, maybe. By the way, patent prosecution "describes the interaction between applicants and their representatives, and a patent office with regard to a patent, or an application."⁸ Investors will almost certainly be expecting to see that a tech start-up has patents or at least patent applications on file.

Large company

If you are part of a large company, filing/prosecuting patents is helpful in protecting your IP and also somewhat helpful in protecting your company from patent litigation. A patent portfolio can also be the basis for a patent licensing revenue stream. Filing/ priority dates are key, and, the earlier you file, the better chance you have of maybe owning the IP space.

Professor/student

Patents help you get new positions, promotions, consulting, and maybe even an expert witness gig. Top-10 universities are usually super supportive of patent prosecution by faculty, as it is a potential source of revenue. Non-top-10 universities usually have no credible patent prosecution or licensing soulthey will say absurd things like, "We will prosecute your patent if you raise funding for your start-up and use those funds to pay for that prosecution of that patent, with the university still being the assignee and your start-up being a licensor of that IP," or "We don't want to put money into patent prosecution, as we will probably make more in donations from the companies to whom we would have to send demand letters." Or even worse, the university will say something like, "We spent all our prosecution funding on our annual TedX event." Good grief.

Protection from NPEs (or, pejoratively, patent trolls)

If your key patent was filed some time ago, and your company is now worth more than \$1 billion in valuation, congratulations, your company is now worth more than \$1 billion, but also condolences—as you now will become the target of NPEs and competitors. If you have a well-done patent written in tandem with solid attorneys, and your patent coverage is sufficiently broad to cover what your company actually makes, then you should be in better shape. You may end up in patent litigation with a defense cost of US\$10 million per year until settled, though. Some NPEs send out demand letters to all possible parties—I know one case I was expert for where the NPE sent out demand letters to 160 game companies!

Sometimes you make money from patents and receive royalties, and it's like Christmas....

HOW TO WRITE PATENTS

Writing a complete patent by yourself is somewhat possible, but you really do need an attorney to take what you have drafted and then put your technical scribblings into proper form for submission to the U.S. Patent and Trademark Office (USPTO). This is especially true for the claim language, which I cover in more detail later. Now, attorney selection is key. If you are inside of a university that is not top 10, most likely, your patent prosecution will be subbed out to a random law firm for prosecution. If you are a computer scientist working on new virtual reality (VR) technology, and your patent is in that space, ideally, you would like the law firm used to have strong experience in that technical space. That is highly unlikely, as the university selected the outside law firm some time ago for some other reason, probably to take care of internal scandals, and the previous patents they filed were not in the tech space but something different, like chemical engineering.

Selecting the wrong law firm with an improper background will extend the length of prosecution to an unacceptable infinity of time as that law firm struggles to understand what you gave them. They will also begin changing all your terminology into something they do understand, which will make your patent sound crazy and uneducated. I believe you have received my message on attorney and law firm selection. I have my favorite attorneys for patent prosecution and will not disclose them to you, as I don't want my patent prosecutions to take forever.

Also, please write the patent as much as you can and skip filing a provisional. A provisional application is a legal document filed with the USPTO that establishes an early filing date for your invention and gives you one year to file the patent application with that early filing date. Provisionals are for procrastinators. Don't give the university the ability to file a provisional for you and then say, "We have run out of prosecution money and can't file the patent." Put them into the corner with this straightforward move of handing them the complete patent.

PARTS OF A PATENT

I am going to assume that you are smart and that you want to do as much of the patent drafting yourself so that the attorneys who prosecute your patent don't have to make up too much of your patent out of whole cloth. This is important for speed in patent prosecution. Therefore, what I am going to do is tell you about the key parts of the patent that you ought to write, and I am going to tell you the order in which you should write them. This will seem quirky, but stick with me! You might look at U.S. Patent 10,687,051 B1⁷ as an exemplary patent as we go through the parts of a patent.

Patent title

The patent title is a 10-word or so title. Make this title so that it tells the reader the ballpark area of what the patent is about. I always tell my Ph.D. students to write the title first and that, if they can't write the title, they don't know what they are doing. So write this first!

Applicant, inventors, and assignee

Applicant is normally the company or university that is filing the patent for the inventors. Applicant can also be a person.

Inventors are the people who did the work that will be detailed in the patent and covered by the claims of the patent. Sometimes this is a long list. Remember that the best way to make a blood enemy in a university is to leave an important coauthor off of the paper you have just submitted. The same is true for patents. Make sure the lead inventor is first and that the name order after that is the second inventor and so on. Have this locked down before you hand your draft patent to the attorneys for prosecution. The list should include all of the people who contributed to the ideas claimed in the patent but should not include people who made no such contributions. Removing or adding a name later in the prosecution process can cause huge problems emotionally, legally, and bureaucratically.

Assignee is the owner of the patent and, normally, is the university or company where the work was done. If you are in a non-top-10 university, your university might ask you to personally fund the patent's prosecution with the university still listed as the Assignee. That is part of why they are a non-top-10 university.

All of this applicant, inventors, and assignee stuff ought to be easy to just write down. If you are having a problem with being able to do that, stop and fix those problems now before the bullets fly. Your attorney will help you sort out any issues with these items.

References cited

References cited are the U.S. patent documents, the foreign patent documents, and other documents (technical papers published somewhere in an archival form). This is just like publishing a paper you are submitting to a conference or journal. In patents, the length of this list is something to carefully consider. If this list is long, you are potentially giving the patent examiner more ammunition for a rejection during prosecution. However, not disclosing something relevant is a no-no because it can make the patent unenforceable for inequitable conduct. If a cited document is listed in your patent, it is harder to use that document as prior art to overturn your patent later if there is litigation.

One patent I worked on for a case had four pages of other documents listed in six-point font—they listed all textbooks and key technical papers on networking from the birth of networking to the filing date of their patent with the hope for infinite protection from prior art. In the best situation, you, the inventors, provide this list of prior art, but, if your attorneys work in your technical area, they might also add helpful references. The USPTO might also add to this list during your patent's prosecution.

Abstract

The abstract is three to four sentences on what your patent purports to cover. Don't go too crazy here because there is a 150-word limit. This is just like an abstract for a technical paper. The first thing you need to write in writing a patent is the patent title and the second thing is the abstract. If you cannot write the abstract, you do not know what your patent is about.

Draft illustrations

The third thing you need to create for your patent is draft illustrations showing key software architectures, processes, or algorithms that are part of your patent or are embodiments showing a way your patent can be deployed. Embodiment is weasel wording for "here is one way to do it but not the only way." There are special patent illustrators who will take your drawings and sprinkle them with numbers that can be referenced from the text in "the spec" part of the patent. You will get used to reading patents that have numbers sprinkled throughout the spec someday unless you are me.

The spec

The spec is a very long piece of writing, and, if you have the proper attorneys, they will write it for you. This means your attorneys are knowledgeable in the field. If your attorneys are random with respect to your field, you should try and write the spec so it doesn't sound crazy with new crazy terms invented.

So what is the spec? The spec is everything after the illustrations up to the claims. Sections in the spec may include related application information, notice of copyright and trade dress, background, field, description of the related art, description of the drawings, and detailed description.

Related application information is pointers to your provisional, if any, and originating patents/publications and USPTO documents from which the current patent is derived. Also included are the important filing and issuance dates for the cited documents.

Notice of copyright and trade dress means that there are company-copyrightable things in the patent and that it is okay for that to be in the patent but with company rights still reserved to the company. The same is true for trade dress.

When most people refer to the spec, they are thinking of the sections for background, field, description of related art, description of the drawings, and detailed description. Background starts with field, which is a one-sentence description of the area to which the patent relates. Description of the related art is a section that states, in two paragraphs or so, what people do now in the field that is different from the patented idea. Description of the drawings has one-sentence titles for each drawing in the patent. Detailed description is the long part of the spec. That section talks in detail about the hardware apparatus, if any, the algorithms, the software, and specific embodiments of the patent.

The claims

The claims of the patent are the most important part of the patent. Claims are the details of the invented

technology. Claims are the basis of most patent litigation.

Let's put out two sample claims from 10,687,051:

"It is claimed:

1. A system for viewing computergenerated content comprising:

a movable display including a display screen; at least one tracker for tracking the movable display; a computing device configured to generate the computer-generated content; wherein the movable display is configured such that movement of the movable display relative to a viewer's head is detected using the at least one tracker is translated by the computing device into alteration of a viewing area of the computer-generated content corresponding to the movement of the movable display relative to the viewer's head, by: generating a matrix representative of a position and orientation of the movable display in physical space; generating a second matrix representative of a second position and a second orientation of the viewer's head: merging the matrix and the second matrix into a final matrix; and rendering the computer-generated content on the movable display based upon the final matrix.

2. The system of claim 1 further comprising a head-mounted tracker for detecting the second position and the second orientation for the viewer's head."

Let's start with claim 1. Claim 1 is an independent claim. The first line is the

GAMES

preamble of the claim: "A system for viewing computer-generated content comprising." Then, the rest of the indented phrases are the "limitations" of the claim. The inventors are claiming the invention of a system for viewing computer-generated content containing each and every limitation of that claim. Therefore, this provides IP protection for the inventors for systems that literally match all the limitations in the claim. If someone comes out with a system, and it can be shown that that system matches all the limitations of that claim, then the patent owner can start with a demand letter to the developer of that system for royalty payments. If an agreement cannot be easily reached, the inventors, through their attorneys, can file a complaint of patent infringement. Necessarily, this is an overly simplistic description of an extremely complicated topic, but this is just a tutorial and not comprehensive. By the way, even if a system does not literally match all of the limitations of a claim, the system might still infringe under what is known as the *doctrine of equivalents*, but that is also a very complex topic that you would need to discuss with your attorney.

Claim 2 is a dependent claim. It basically says everything in claim 1 plus "further comprising a headmounted tracker...," which adds an additional limitation to the claim. I will not go into the complex topic of why you may want to have dependent claims—that is also a topic for a chat with your attorney.

Therefore, patent litigation is all about the supposed infringement of patent claims of inventors by companies that have built a product using

Activision Blizzard	MTV Networks
Amazon	Namco Bandai Games America
Apple Computer	NCSoft
Atari Inc.	Neversoft Entertainment, Inc.
Big Viking Games	Nexon
Bungie	Niantic Labs
Capcom USA, Inc.	Nintendo of America
Cartoon Interactive Group, Inc.	Nvidia
Cryptic Studios, Inc.	Oculus
Disney Interactive Studios, Inc.	Popcap Games, Inc.
Electronic Arts, Inc.	PUBG
Epic Games	Rockstar Games
Facebook/Meta	Samsung Elecs. co. Ltd
Google	Sega of America, Inc.
Gree	Skillz
Gaia Interactive	Sony Computer ent. of America
Gameloft	Sony Online
Games2U.com	Spin Master
Google	Supercell
Gree	Take-Two Interactive
Harmonic Music Systems	Treyarch Corporation
IGT	Turbine, Inc.
Illinois Tool Works	Ubisoft
Miller, Seabury Solucion (Spain)	Valve
Index Digital Media	Viacom Inetrnational
Infinity Ward, Inc.	Warner Bros. Interactive
LucasArts	Xfire
Microsoft	Yahoo! Inc.
Miniclip Tech	Zynga, Inc.

FIGURE 1. The companies I have been expert witness for (58).

the inventors' ideas without properly taking out a license for the use of the inventors' developed IP. There is a complainant side (plaintiff) and a defense side and piles of attorneys on each side—and, most importantly, expert witnesses who opine on technical issues involved in the litigation.

MY LIFE AS AN EXPERT WITNESS

An expert witness is a specialist who works with attorneys to sort out the technical issues in cases of patent litigation—usually, an expert witness holds a bachelor's, master's, or Ph.D. degree in the required technical field (computer science, electrical engineering, and so on). Sometimes, a lesser educational background is accepted. Sometimes, even members of Mensa show up as experts.

I started as an expert witness in October 2004 to pay my moving costs from the NPS to the University of Southern California. I had no idea how long the expert project would go on—I figured it would be over in 90 days. It went from October 2004 until March 2008, with my parts in this litigation being bursty—on for three months, then asleep for six months, then awake, and then asleep.

I have a lot of experience as an expert in patent litigation and have been in some 49 cases of patent litigation for some 58+ game and computing companies and some 36 law firms (see Figures 1 and 2).

What does an expert witness do?

An expert works with attorneys to provide an opinion via declarations, depositions, and testimony on the following:

- > Invalidity: Is there earlier prior art with all the limitations of the claims in the litigation?
- Noninfringement: Does the game/ technology in suit not perform all the limitations of the claims in litigation?
- Damage computation: I generate a model of what potential licensing fees might be should our

client (the game company) have to pay them.

I learned patent litigation on the job....

Expert witness experience

Is being an expert witness fun? It is fun and profitable. The one thing I can say about being an expert is that I now know how to write patents claims really well. The last three patents that I wrote the claims for were submitted to the USPTO and came back as issued patents in five months without any changes—so super valuable from that perspective. Do this and become excellent at drafting patents!

TECHNICAL SCOPE OF MY EXPERT WITNESS EXPERIENCE

Figure 3 is my attempt to provide a high-level technical scope for the kind of issues that I have seen in my expert witness experience. It is high level as the actual details have a timeline component not shown in the illustration and high-level as the details are more complex than this. I will try to make this fun so you do not fall asleep.

Game network software architectures

Game network software architectures are the high-level block diagrams one usually draws at the application layer of networking to show the flow of control and packets in the networked game. Now, I have been on many, many such cases. I have had to learn the network software architecture that Activision uses, the Sony PlayStation Network, Valve's Steam architecture, Nexon's online infrastructure and others.

Most of these cases can be boiled down into the following categories:

- > We invented client-server network architectures recently.
- We invented the idea for the web and now believe it applies to online games.
- The algorithm in our patent doesn't work, but we are still demanding payment from you.

 The algorithm isn't efficient, and no one would ever do it that way, but we are still demanding payment from you.

I think you get my point. None of these has contributed anything toward the new technologies TJ wanted to happen. However, what is very important to know is that, when a demand letter arrives at a game company's door, that company must move heaven and earth to defend itself, its game, and its technologies. The defendant cannot just ignore that demand letter. Patent law seems backward from normal lawthe plaintiff can accuse the defendant of infringing its patent, and the defendant has to defend against and prove it's not so, which is very expensive. In normal civil law. the accuser must prove the defendant violated the law. In patent litigation, this is almost backward because, if the defendant does not show that its technology is not violating the patent, then only one-sided evidence will be coming from the plaintiff. By the way, a defendant can also win if it shows that the patent is invalid and should not have been granted in the first place, but that is another complicated topic that I won't get into here.

Purported IP theft

Purported IP theft means that the plaintiff has accused the defendant, or the company, of having somehow used its IP without permission or paying a licensing fee.

There are many types of purported IP theft. Source code theft accusations usually mean that, somehow, someone has gotten the plaintiff's source code and potentially used it inside of the defendant's game or technology without permission or license. Proof of this usually requires a clean room with two machines, one with the plaintiff's source code and the other with the defendant's source code. Experts are hired by both sides to compare source codes by looking at two separate monitors on two separate computers, and this is excruciatingly painful and unfun. Once these two computers are set up and this process starts, if the companies are both real game companies that make money, they will then rapidly get to settlement once they realize how amazingly expensive such a source code comparison is.

Art theft is similar to source code theft. Litigation usually starts by someone noticing that the bar scene in game 1 looks amazingly similar to the bar scene in game 2. Again, the

Latham & Watkins

Mintz

Oliff PLC

McAndrews Held LLP

Mitchell Silberberg LLP

Pillsbury Winthrop Shaw Pittman LLP

Robins, Kaplan, Miller & Ciresi LLP

Omelveny & Meyers

Quarles & Brady LLP

Shook, Hardy & Bacon

Winston & Strawn LLP

Weil, Gotshal & Manges LLP

Wilson Sonsini Goodrich & Rosati

Quinn Emanuel

Ropes & Gray

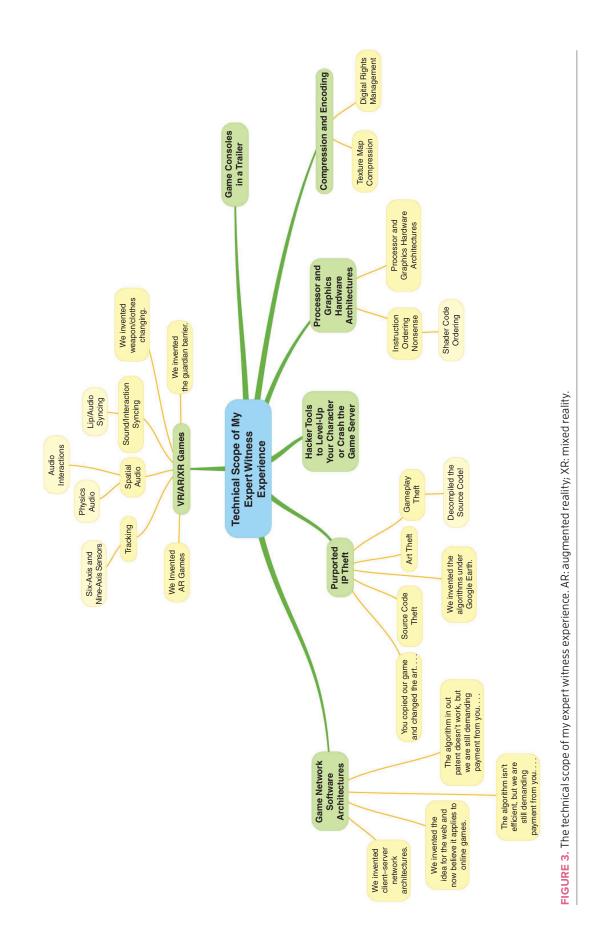
Wilmer Hale

Wolf Greenfield

Winston & Strawn

Akin Gump BakerHostetler Barcelo, Harrison & Walker Brown, Rudnick LLP Cooley LLP Duane Morris eRise ip Fenwick & West Finnegan, Henderson, Farabow, Garrett & Dunner Fish & Richardson PC Gibson, Dunn & Crutcher LLP Goodwin Procter LLP Irell & Manella Jenner & Block K&L Gates, LLP Kasowitz, Benson, Torres & Friedman LLP Kirkland & Ellis LLP Kirkpatrick, Townsend & Stockton Klarquist Sparkman LLP

FIGURE 2. The law firms I have been expert witness for (36).



two-computer setup described previously will get built, and settlements will follow for real game companies once they realize that art comparisons are more expensive than source code comparisons.

Gameplay theft is the idea that game 1 has exactly the same gameplay as game 2. There are many accusations of this that are along the lines of, "You copied our game and changed the art." Very hard to prove and hard to litigate. I have only encountered one case where the defendants indicated they decompiled the executable of a popular game and made it run from the original art assets! I was more amazed that the defendants didn't fold immediately. Litigating this means comparing the gameplay of the ersatz game against the original. Craziness.

Hacker tools to level-up your character or crash the game server

Wow! One case I was expert for was to sue an Internet service provider (ISP) that carried a website where you could download a piece of software that would crash the game servers for two popular games. Additionally, that website would sell you a subscription, US\$10/month, to purchase another piece of software that would level-up your character for those two games. Evidently, there were 300,000 subscribers to this software, is what I was told. Now, the attorney representing the game company indicated there was just one website—one of my researchers and I immediately found two more websites and knew that new websites for this could be stood up with little effort—just purchase a new domain and web service, and away you go. I suggested to the attorney that, perhaps, the game developer should consider repairing its security infrastructure for that game-we discovered that the packets were not encrypted, and, as a start, we suggested that minimal fix. Without that encryption, packet replay attacks made their games quite vulnerable. What

pathway did the attorney take? He fired me as the expert, as that is not the pathway to billable hours. Message received.

Processor and graphics hardware architectures

An area that I am frequently asked to opine on is processor and graphics hardware architectures. I have been the expert on the graphics hardware architecture used in the most popular mobile phone and tablet. There is always someone who has a patent on a small piece of technology that they believe is the be-all and end-all that makes the iPhone happen. Well, the accused infringing implementation has to perform all of the limitations of the claim/claims in the suit, and the plaintiff has to prove that is so. Defendants in such cases usually are able to show that they don't do it that way at all or that they do it without some of the essential claim limitations, and the suit moves rapidly to settlement or summary judgment.

One case I had in the graphics hardware architecture space comes under what I call *instruction ordering nonsense*—the patent in suit kind of looked like this:

- 1. Execute a computer instruction and set condition code 1.
- 2. Execute a second computer instruction and set condition code 2.
- 3. Execute a third instruction to branch on condition code 1.

Now, this was initially confusing to me, as I was wondering, "What was step 2 about?" Well, it turns out this is a case of what I call *patent prosecution cruft*. In looking into the file history for the patent, you can see that, originally, step 2 did not exist in the claim. The USPTO rejected the claim as branching logic that was there at the start of computing, but somehow the patent owner was able to convince the USPTO that, if they stuck step 2 into the claim, it was now new technology! Took a lot

COMMENTS?

f you have comments about this article, or topics or references I should have cited or you want to rant back to me on why what I say is nonsense, I want to hear. Every time we finish one of these columns, and it goes to print, what I'm going to do is get it up online and maybe point to it at my Facebook (mikezyda) and my LinkedIn (mikezyda) pages so that I can receive comments from you. Maybe we'll react to some of those comments in future columns or online to enlighten you in real time! This is the "Games" column. You have a wonderful dav!

of effort and time and money for the game console maker and the graphics hardware company to get to the summary judgment. No contributions to new technology involved.

Graphics algorithms for texture compression are a popular expert witness topic and, again, the plaintiff usually represents these as the be-all and end-all technology for whatever platform it is suing. It normally boils down to a damage computation declaration where this new algorithm is compared to another compression algorithm for which a lowcost license has already been obtained.

Digital rights management (DRM) architectures are a frequent patent litigation. DRM has been around for just about forever, and there are always new patents that claim to have invented DRM recently. I had to learn the architecture of Steam for one such case.

VR/augmented reality/mixed reality games

VR, augmented reality (AR), mixed reality, and their technologies useful for games are a huge litigation area now—they are all knocking on my door. Tracking technologies, six-axis and nine-axis sensors—patents from the second wave of VR (1985–1996) are reappearing, owned by NPEs going after anyone selling billions of dollars worth of VR headsets (primarily Meta).

Spatial audio for use in VR/AR is a huge litigation target also, particularly in the physics of visually displayed materials and audio interactions realms. The syncing of VR/AR characters' lips with audio is also a huge area of litigaopinions that are opposite from what I wrote in my declarations. The key is to write declarations that are as complete and correct as possible so they can form a strong basis for your opinions.

In a deposition, it is perfectly okay to answer each question of the opposing counsel by referencing your declaration, spending the time to find the right paragraph that you can then read into the record. There is no time limit, and you can

Experts are hired by both sides to compare source codes by looking at two separate monitors on two separate computers, and this is excruciatingly painful and unfun.

tion. The changing of VR/AR characters' clothes and armaments is an area of litigation.

There is a publisher of an El Segundo-based local paper that claims to have invented AR games. There are several others as well. There is a patent claiming the visual guardian barrier used in almost all VR games so that you know when to stop walking, as there is furniture you are about to trip over.

Game consoles in a trailer

There is a one claim patent "teaching" the setup of game consoles inside of trailers that can be driven to kids' parties. There is a patent on a "Method of Exercising a Cat."⁴

DEPOSITIONS AS SPORT

The primary thing an expert does is to work with attorneys in drafting declarations that opine on the technical issues at hand in the current case. Once those declarations go to the other side, the other side responds with a declaration responding to what I wrote. I usually get a chance to do a short response to that declaration right before a date is set for my deposition. Now, the purpose of the deposition is to see if the opposing counsel can get the deponent (me) to create new opinions—opinions that are not in my declaration or read the same paragraph multiple times to the opposing counsel, just in case he didn't understand you the first and second times, and you can do that until usually about the 13th time you get asked the same question, when the opposing counsel will move on. My last deposition for two inter partes reviews lasted 29 min before the opposing counsel folded. The bonus is the opposing counsel will never want you at trial in front of a jury of your peers. I list depositions as one of my sports, right after swimming.

DO YOU HAVE TRIAL EXPERIENCE?

I have been interviewed for maybe three times as many cases as I have actually done. I usually lose the gig when I answer the question, "Do you have trial experience?" The answer is no, I don't have trial experience—because usually you only get to trial if your declarations are not solid or if they are sloppily written. You don't get to trial if the opposing counsel cannot crush your soul. I do have lots of Patent Trial and Appeal Board administrative hearings, which are kind of Depositions++.

his article is not intended to be comprehensive coverage of patents and patent litigation with respect to games and game technologies. The purpose has been to inform the readers of *Computer* a little bit about how to author patents, how to participate in litigation as an expert witness, and how to make the world a better place with respect to the invention of new technologies for games.

ACKNOWLEDGMENT

I have worked as an expert for 36 different law firms for 58 game and computing companies on 49 different cases. I usually interact directly with three to five attorneys at each firm on each case and sometimes 13 or more attorneys, so I probably have worked with more than 200 attorneys. I did three depositions in a row for one law firm, and the opposing counsel for that case tried to hire me for their next case! I do have some favorite attorneys. Eric Buresh of eRise (formerly of Shook, Hardy & Bacon) taught me about the role of the expert and patent litigation at the very start in 2004-he is greatly appreciated by me. When I organized the continuing legal education course for the LA County Bar Association, I invited Rey Barcelo of Barcelo, Harrison & Walker, as I have done many projects with Rey, and he is a great attorney. Rey did a great read/revision of this article, and I thank him for that effort! Josh Harrison of Barcelo, Harrison & Walker is the best prep attorney for teaching you how to do a deposition. I crush the spirits of the opposing counsels because of his teachings. Sonal Mehta of Wilmer Hale, David Rokach of Kirkland & Ellis, Andy Brown of Quinn Emanuel, and Ellisen Turner of Kirkland & Ellis are all outstanding attorneys whom I have worked for as well. The others I do not mention are also great—I just cannot list you all.

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