

The Peloponnesian Project

Business Strategy:

Patents, PS3, XBOX2

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By K.M. Yow

Email: kmyow@yahoo.com

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1.Introduction.

1.1. Description.

The console software market is among the most successful in the world with billions of dollars in sales annually. Major platforms in this market are PlayStation, Xbox and Nintendo. Software developed for this market is primarily entertainment in nature characterized by high performance graphics, dynamic environments, brilliant AI, great music and involving story and plotlines. There is a drive for technological dominance by the companies behind the major consoles: Sony, Microsoft and Nintendo. Over the last year or so shaders have become a new paradigm for graphic software development and as a result new architectures are required to accelerate shader programs (specifically parallel computers or highly parallel pipelined graphics cards). However the possibilities of e-commerce and massive online games expands even more when the new architectures are linked through the Internet to servers (an internet based architecture). As a result of striving to outdo each other NVIDIA (which supplies the graphics muscle for the XBOX) and SONY which uses Toshiba's emotion engine to power the PlayStation have filed early software patents to protect the next generation architectures that will be used to build the PlayStation3 and the XBOX2. In this paper I show how and why a better strategy would have been to keep the architecture proprietary and to file only defensive patents in response to new patents that may have impacted the new consoles' architecture. The individual consoles could then have been developed and moved into preproduction from R/D and then only when poised for manufacturing, the software patents that are currently being filed could have been released with their success and failure not an issue for the consoles entry into market. Because parallel computers and the internet is an area filled with prior art, I show a conclusion in which software patents are delayed and instead proprietary software kept and using an architecture built around open source servers and prior art architectures with a gradual release of marketing materials and specification would have prevented prior art and defensive patent difficulties when the actual consoles were released. i.e. Do not file software patents blindly, center the software patents on the business strategy and not the other way around.

2. Software Patents.

2.1. Motivation Behind Software Patents

Is software more like a book or is it more like a process or machine?

Each position has its proponents and detractors. If it is a book, copyrights are more than sufficient to protect it, if it is a machine, definitely patents have a role to play.

Software patents seemed to be the answer to that conundrum and that would have been the end of the matter save for one thing: software has a generative capacity far exceeding that of an ordinary machine or process because of its hybrid nature. To illustrate the point let us consider a hypothetical invention: a basketball that bounces up and down using a solar panels as its source of power. It is apparent that a patent would be more than sufficient to protect this invention. The amount of prior art is within searchable limits and one can be assured that a reasonable search would uncover most if not all the prior art. The limits on generating the invention are placed by the laws of nature, Hence the effectiveness of patent protection. For example: 1) you need highly efficient solar cells, 2) the elastic material suitable for basketballs can be narrowed to a few classes and 3) to get a good long bounce you need some sort of stable energy exchange between potential and kinetic energy. 4) Furthermore generating the invention involves significant real world manufacturing costs.

Now contrast software. There is no law of nature that limits the amount of software and creating software follows no natural law hence the amount of prior art rapidly expands transforming a search from reasonable to unreasonable.

2.2. Implications of the open source movement for software patents

The statutory bar for the filing of software patents is constantly being raised by the sheer weight of source code that is being released as open source. Where once it was a trickle, it has become and is becoming a torrent /or a flood.

Running through the Apache and Linux source code shows that this is the case. In order to understand the code, even though it is open sourced, you simply exhaust yourself going through millions of lines of code. Software programmers do not go through every line of code, relying instead on API's and encapsulation to handle the complexity. But patent agents

seeking prior art among open source code for software patents need a higher standard of prior art.

Again one suggestion would be to lower the standard of prior art requirements. Unfortunately too low a standard you end up with:Copyright!!!!

The search for prior art among such voluminous code rapidly becomes prohibitively expensive in time and cost so in most cases only a limited search can be done. Searches for prior art that are limited in nature considerably weakens the validity of software patents should prior art exist among the open source code but is not included in the search.

2.3. Implications of the release of patents filed in the 1970's and 1980's into public prior art for software patents

The 1970's and 1980's were the most prolific period in computer technology. Much of the technology around today have their genesis in the inventions of the computer pioneers of that period. As patent periods expire, the patents automatically become public prior art. Of course one would suggest that patents be extended in the same way as copyright laws. Unfortunately a lot of patents depend on other patents, for example the car patent depends on tire patents and door patents and other prior art both public and patented and this extends all the way back to the beginning of the patent system. So if you extend for one you invalidate some else's patent and that in turn invalidates another person's or corporation's patents until the patent system enters into disarray. In addition, a lot of public prior art will simply evaporate. This is in sharp contrast to copyright where after all you can only have one Mickey mouse or Donald duck. You are more than welcome to create another cartoon character that is a duck or mouse except you can't call it Mickey or Donald which sidesteps the problem above. In computing terminology, this is called low coupling.

3. PS3 AND XBOX2 BUSINESS STRATEGY

3.1. XBOX2 Business Strategy

Students of Microsoft Business strategy always receive a dawning realization that the enormously successful behemoth has a virtual arsenal of patents already held, in patent pending application mode and/or kept as trade secrets for business domination. In response to competitor patents, defensive patent pending or even actual software patents have reached the public eye, showing quick strategic and legal finesse and acumen in putting XBOX2 on a strong legal and technological foundation with respect to software. However even in such circumstances, the impact of open source software cannot be evaded, but like every successful organization Microsoft has shown great adaptability to the challenges and opportunities created by open source. So if nothing is found in patent searches it does not mean nothing is patent pending. XBOX2 will most likely result in forays into hardware and content and based on Microsoft's previous track records result in an emergence of a giant not only in software but also in hardware and content as well. Unfortunately to counter overbroad claims, the defensive software patents themselves have to be overbroad, so expect a lot of worried companies and defensive patents to be surmounted!!!

3.2. PS3 Business Strategy

The software cell represents SONY first foray into the area of software, having achieved enormous success and leadership in content and hardware. However what works for hardware, (patents), content (copyrights) need not necessarily apply to software due to the existence of powerful players like Microsoft, Sun and IBM. Defensive patents could be written to replace the software cell architecture with a packet ,java on the wire or even .NET xml messaging architecture and because the patent is ubiquitous, there is a lot of anticipation by prior art with a consequently large number of defensive patents erupting!.

Also by revealing the software architecture in the patent rather than keeping it proprietary, an alternative hardware architecture can be constructed out of shader, java and .NET virtual machines connected in parallel and receiving objects on the wire via internet or other means by competitors like Nintendo which hasn't announced an architecture or other interested competitors. Of course, competition is always a good thing for consumers.

The situation now is that should PS3 decide to extend its architecture into the internet it must first also like XBOX2 surmount defensive patent difficulties from a lot of worried companies!. In the future SONY will most likely refine its strategies and deepen its control and use of software through its tie up with IBM, an undisputed leader in open source, with its own gigantic arsenal of patents and emerge as a power not only in hardware and content but also in software.

3.3. Conclusion

There is considerable evidence that companies like SONY, IBM, Nintendo and Microsoft are moving into non-traditional areas and driving a sea of change in the way business and entertainment is distributed, produced and controlled. And in doing so, they will inevitably compete with each other. Meanwhile the growth of open source continues to weaken software patents in more ways than one. In assembling a business strategy for software in such an environment, the most ideal strategy would be one in which software patents are delayed or filed defensively. Instead an open systems architecture built around proprietary software, open source/prior art software and a marketing/promotion/branding concept can help prevent prior art and defensive patent difficulties when the actual consoles/pdas/network/handphones devices were ready for market and networking, because an architecture that takes into account everyone's interests worries no one.

This validates the Peloponnesian architecture which is an Open Systems architecture.

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