



Patent Coin Blockchain

:: The world's first IP asset-backed crypto-coin exchange ::

www.PatentCoinBlockchain.com

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PREFACE

Patent Coin Blockchain is brought to you by Worlds, Inc., one of the earliest developers and adopters of key technologies used in today's virtual reality (VR) and immersive environments. As early as 1994 the company has been engaged in the research, development and licensing of 3D online worlds, the kind of technology that powers MMROG (massively multiplayer online game role playing). The company successfully built and maintained a portfolio of intellectual property (IP) methods for users to interact in virtual spaces. Throughout the years, Worlds, Inc., technology has been known to be in use in popular titles across market leading consoles and video games. As owner of 10 US patents for client server load balancing, Worlds, Inc., has been pursuing an active IP licensing program for 3D applications in a multi-server environment.

Recent technology advances in **blockchain** and **tokenization** for digital assets makes it possible to share the ownership of key IP assets. Worlds, Inc., is launching a Worlds Patent Coin (WPC) to the market in an Initial Coin Offering (ICO), as a decentralised and distributed ownership stake in (a) existing patent licensing portfolios, and (b) future patent infringement litigation proceeds. Words, Inc., active patent infringement litigation portfolio is valued at millions of dollars, thus giving early WPC investors an opportunity to participate in future rewards and annuities from royalty fees.

Patent Coin Blockchain is the home and exchange platform where the WPC ICO will be available for purchase.

The Worlds, Inc., ICO is the first of its kind, as it tightly couples the WPC to an existing IP portfolio, in use by popular titles and market leading video games. The use of smart contracts' technology will govern and automate licensing proceeds pay-outs. Worlds, Inc., will actively pursue further strengthening of its 3D online worlds portfolio and advance the state-of-the-art in the use of blockchain technology for the efficient and effective management of patents' portfolios. This allows the investors to benefit from rising stock prices while also profiting from infringement litigation directly.

EXECUTIVE SUMMARY

Patent Coin Blockchain was conceived and created in 2018, by Thom Kidrin

First, let's revisit some of the fundamentals of using blockchain technology to produce and distribute (virtual) tokens of stake in a business.:

- (a) Blockchain technology is really good at registering records of change (transactions) in an immutable fashion;
- (b) Smart contracts' technology, itself part of the blockchain fabric, is really good at decentralizing and distributing business logic at scale, at all the interested participants in a transaction;
- (c) Blockchain technology allow for the issuance of a digital token, a.k.a. coin, as a means to digitally exchange value, tokens can be purchased and redeemed using crypto-currencies.

Using the three core elements briefly outlined above, we will develop and distribute a patent coin, and a smart contracts' ecosystem that will enable automatic payouts from patent litigation proceeds and patent licensing fees.

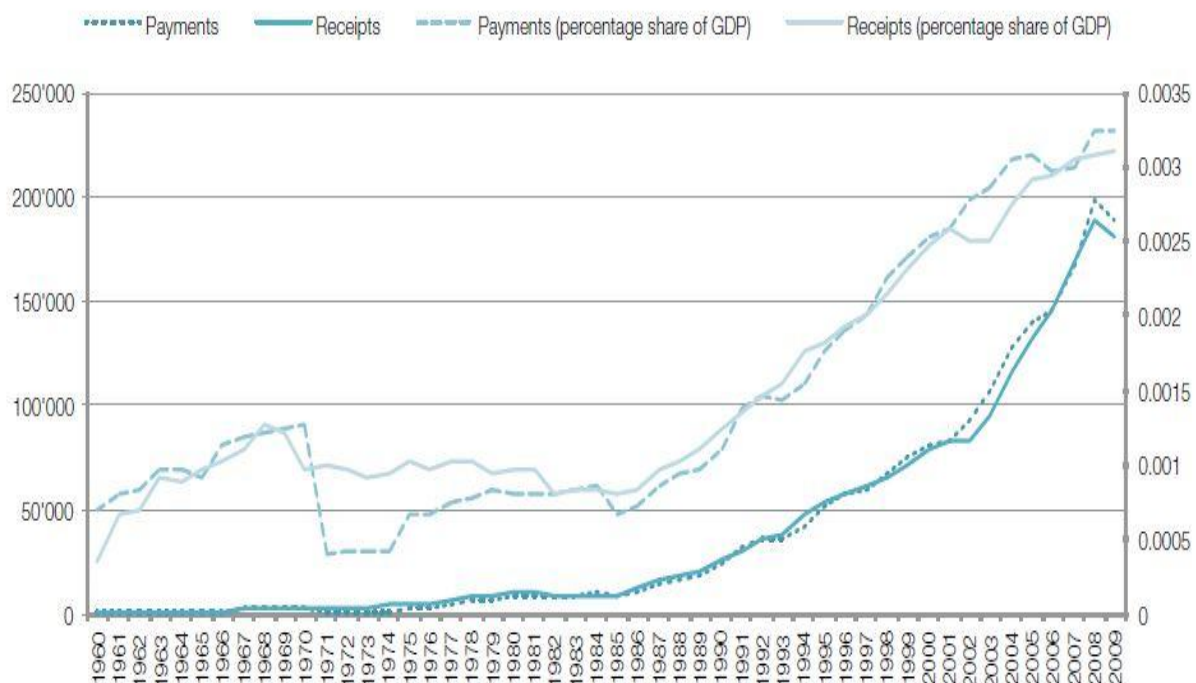
INTELLECTUAL PROPERTY

IP is quickly becoming a core differentiator in today's knowledge economy. It's no longer the steel engines in a factory, the myriads of white collar workers on your payroll or the tons of crude oil reserves in depots that define your strategic advantage in a globally competitive landscape. The company's IP that encapsulates uniquely defined algorithms and inventions to drive services for the knowledge economy, is a key asset for 21st century economies. There is a humongous \$300bn in untapped economic value to explore [11] for unlicensed IP.

However, the full lifecycle management of that core asset, IP, is still done in procedures and technology introduced decades ago. For example, various estimates including an assessment made by Y. Takagi [3], an Assistant Director-General at WIPO, and D. Kappos, former Undersecretary of Commerce for Intellectual Property and Director of the US Patent and Trademark Office [8] – suggest that as much as 25% of the world's patent ownership data may be inaccurate. Correlating this estimate with the total number of patents gives us a rough estimate of around 5 million patent registry data that could be inaccurate. This creates a lot of transactional cost as intermediaries need to be involved to unravel the truth, and opportunity cost as shareholders and investors might miss potential information that could sway their investment decision.

This is where **blockchain technology** comes into play: an IP portfolio can be registered on an immutable ledger (a record of transactions), which is by nature decentralized (everyone can have a copy, no central authority or middle man in the process), trusted and secure (by way of cryptographic encryption of data). Such a blockchain-enabled register can be shared with interested parties, inspected and endorsed by regulators and used as the ground truth in any kind of dispute resolution concerning a patent. It could alleviate some of the pain-points of today's IP management but also introduce new capabilities; which WPC is going to use: smart contracts to (semi-) automate IP portfolio royalty fees distribution and ownership.

RLF payments and receipts, in USD millions (left) and as a percentage share of GDP (right), 1960-2009



Revenue from licensing income using accurate records of patent ownership could also increase to the tune of \$30bn per annum. And the situation could improve further as it resembles that of an iceberg: only the tip is exploited in economic value terms. W.Nordhaus, for example, argued that only 4% of the economic value of innovation is captured by innovators [6].

Looking at our particular sector, that of MMO (massively multiplayer online) games, we see evidence of this market opportunity. In the chart below, we depict global revenues and growth rates for MMO games: a CAGR of 7.6% is a healthy sign for steady growth for a market that brings in more than \$5bn revenues per annum for US MMO game developers only.

(\$ in billions)	2015	2016	Growth Rate
Global Revenue	\$10.32	\$11.10	7.6%
North America Revenue	\$2.82	\$2.95	4.6%
U.S. Revenue	\$2.62	\$2.80	6.9%

- *Categories of MMO games*
 - Role-Playing Games (MMORPG): 50%
 - Casual / Simulations: 30%
 - First-Person Shooter (MMOFPS): 20%
- *Revenue Models for MMO games*
 - Free-to-Play: 75%
 - Pay-to-Play: 25%

Source: The Insight Partners Analysis, December 2016

Interestingly, the subcategory of MMORG (MMOs with Role Playing) which is the specialty of Worlds, Inc., technology amounts to over 50% market share. And market research shows that big companies are willing to invest heavily in this lucrative market: Activision and EA Sports estimate that a new video game franchise can cost up to \$75-\$100M to create while subsequent versions can cost as little as \$10mn.

The industry is also in a turmoil state regard the rightful attribution and award of royalty fees to game developers and IP producers. This has been historically a pain point [17] which appears that is becoming a front line issue in recent years with royalty rates ranging in the 5% to 15%. For example in the cost breakdown analysis table below, we see that for popular console games [16] a licensed content royalty is calculated at 15%.

COST BREAKDOWN FOR CURRENT GEN CONSOLE GAME

	£	%	Description
Retail price	£49.99		
Value added tax	£41.66	20%	
Retailer cut	£ 8.33	20%	Incl. processing fees and additional marketing (e.g. kiosks)
Publisher receives	£29.99		
Cost of goods sold (COGS)			
Hardware royalty fee	£ 4.50	15%	Certification fees paid to console manufacturers.
Licensed content royalty	£ 4.50	15%	Paid for use of intellectual property, such as NFL, FIFA
Development cost	£ 3.00	10%	
Manufacturing/packaging	£ 1.00		
Price protection for returns	£ 2.40	8%	Optional
Distributor cost	£ 1.80	6%	Optional
Gross profit	£12.80		

Notes: Overview of approximate cost breakdown for a single boxed game sold at retail for the current console generation—PlayStation 4, Xbox One. Distributor and packaging costs are generally fixed per unit. Obviously these numbers can vary greatly depending on the relationship between the publisher and retailer. Well-known franchises can command better prices and higher margins. 2015 © SuperData Research.

EXAMPLES

Taking a deeper dive at the current Words, Inc., patent infringement portfolio activity, we see a strong correlation of these projections. In the table below we highlight the estimated damages that Worlds,

Scenario 1: Percentage Based Royalty - Apportionment Approach					
(\$ in millions)	2013	2014	2015	2016	TOTAL
Worldwide Revenues	\$ 4,583	\$ 4,408	\$ 4,664	\$ 6,608	
US % of Revenues	51%	48%	48%	45%	
Top Titles (% of Revenue)	80%	72%	71%	69%	
Est. US MMO Revenues	\$ 1,870	\$ 1,523	\$ 1,589	\$ 2,052	\$7,034
Est. US MMO Revenues (Prorated 9/13 - 11/16)	\$ 623	\$ 1,523	\$ 1,589	\$ 1,881	\$5,616
Est. Damages - Royalty at 5%	\$ 31	\$ 76	\$ 79	\$ 94	\$ 281
Est. Damages - Royalty at 15%	\$ 93	\$ 228	\$ 238	\$ 282	\$ 842

Inc., is rightfully claim in an existing litigation against one of the world's largest online game companies, Activision Blizzard.

Using an apportionment approach, we reach at a damages' figure in the range of \$281mn to \$842mn, cumulatively figure for the past 4 years. That figure has been calculated using insider technical information for Worlds, Inc., patents, industry estimates for the cost of developing game engines¹ and

¹: www.unrealengine.com

their respective royalty fees, when 3rd party technology is used, and Worlds, Inc., successful past litigation outcome against a Southeast Asia games developer.

So, for a typical patent claim construed to cover the entirety of RMF (Robust Multiplayer Framework) technology features as commercial embodiment the apportionment could be in the region of 20% to 25%. Then a royalty rate is calculated at 5% to 15% using industry rates for the unreal engine v4. Features' use (e.g., photoreal rendering in real time, sequencer for state-of-the-art cinematics, terrain and foliage, animation toolset, material editor). Applying these informed and well-constructed estimates, we arrive at the ballpark figure of \$281mn to \$842mn for damages' pay out. And this is from one litigation case only, Activision Blizzard. The company has already identified many potential infringers² and will pursue its licensing fee apportionment in due course. A more in-depth calculation of the apportionment damages' estimation is included in the appendices³.

Why companies defending their Intellectual Property, like Worlds, Inc. are in a unique position to offer Patent Coins...

Worlds, Inc., patents cover key aspects of an online game ranging from interaction of a user with a virtual environment to how avatars are build and function. Worlds Inc. has been granted 10 U.S. patents; (6,219,045; 7,181,690; 7,493,558; 7,945,856; 8,082,501; 8,145,998; 8,161,385 8,407,592; 8,640,028; 9,110,567) for client-server load balancing technology for 3D applications. There are no other 3D massive multi-user virtual worlds companies that have been granted this extensive patent protection. These patents are for inventions that provide a highly scalable architecture for a three-dimensional graphical, multi-user, interactive virtual world system. A plurality of users can interact in the three-dimensional, computer-generated graphical space where each user executes a client process to view a virtual world from the perspective of that user. The virtual world shows Avatars representing the other users who are neighbors of the user viewing the virtual world. In order that the view can be updated to reflect the motion of the remote user's Avatar, motion information is transmitted to a central server which provides position updates to client processes for neighbors of the user at that client process. The client process also uses an environment database to determine which background objects to render as well as to limit the movement of the user's Avatar.

Key data and history of Worlds, Inc., patent portfolio is given in the table below:

Date	Action	Description
November 13, 1995	Worlds files provisional patent application 60/020,296	Scalable virtual world chat client-server system
August 3, 2000	Worlds filed additional claims as a continuance to our 1995 patent application	Additions to patent application 60/020,296
April 17, 2001	US Patent 6219045 issued	Scalable virtual world chat client-server system
February 20, 2007	US patent 7,181,690 issued	System and method for enabling users to interact in a virtual space issued as a continuation of patent 6219045
May 14, 2011	US patent 7, 945,856 issued	issued over prior art presented in NC Soft litigation
December 20, 2011	US patent 8, 082,501 issued	issued over prior art presented in NC Soft litigation

² See Appendix #2 for a more detailed breakdown analysis

³ See Appendix #3

March 27, 2012	US patent 8, 145,998 issued	issued over prior art presented in NC Soft litigation
April 17, 2012	US patent 8,161,385 issued	issued over prior art presented in NC Soft litigation
January 26, 2014	US patent 8,640,028 issued	issued over prior art presented in NC Soft litigation
August 18, 2015	US patent 9,110567 issued	

THE WORLDS PATENT COIN PROJECT

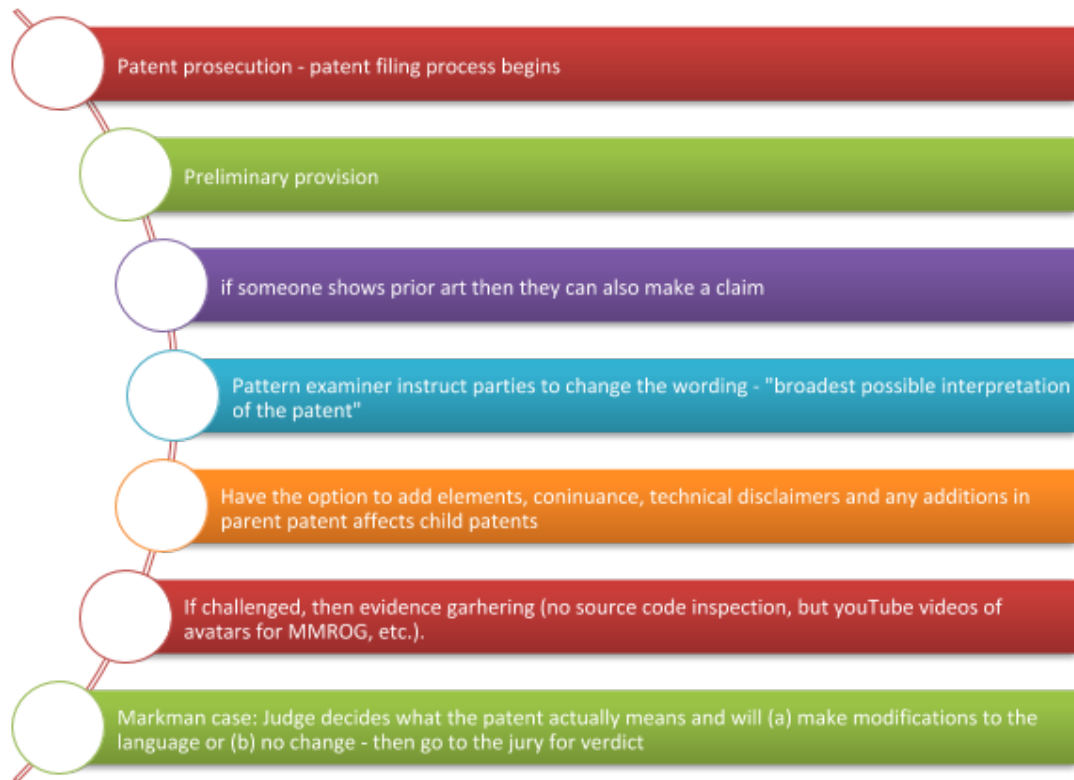
Worlds, Inc., introduces the Worlds Patent Coin (WPC). It is evident that blockchain technology is bringing new innovations and alters business models across all industries. Worlds, Inc., is poised to explore the fascinating blockchain world to bring change to the rudimentary patents' ecosystem that is struggling to cope with 21st century knowledge economy dynamics. Using Worlds, Inc., extensive know-how on producing, protecting and managing key IP technology over the past 20 years, we believe we are in the best position to introduce a game changing project: WPC.

Moreover, as our technology is company, patent and court agnostic, our project would evolve over time to a generic patent coin that can be issued and used against any patent, from any company, in any jurisdiction across the world. In short, we are developing the next generation patent management system using blockchain technology and smart contracts.

The problem

The lifecycle of a patent, and most importantly it's defence and rightful attribution of royalty fee is a long and arduous process. At the filing stage (a.k.a. patent prosecution), there needs to be a thorough and extensive search process as most patents require a full prior art search before the patent application process can even begin. There are millions of patents registered patents at key patent offices across the world, making a comprehensive search of existing, patented technologies timely and costly. It can cost upwards of \$2,500. For a single patent. Once there is a degree of confidence that the patent has significant chances of getting granted, an initial provisional patent is prepared. That ranges between \$1,000 and \$5,000 by the time is drafted and submitted. And this is only a fraction of the cost for a full patent. If a patent is deemed to be a utility patent, then the cost increases, and is typically in the \$5,000 to \$50,000 range. Most of these fees are incurred during the legal review stage and documentation writing. But as the process is understandably prolonged and time consuming, additional fees incur and it's not an exaggeration to expect a three to five years cycle for a patent prosecution to conclude with a total cost nearing \$30,000. At that point there is still no guarantee of a patent issued; it's all at the filing stage. Eventually, a patent issued could incur costs in the hundreds of thousands of dollars, especially if prior art is contested, or the searches are inconclusive, and need further evidence and more documentation.

Let's examine, in a graphical representation, a typical flow for a successful patent filing and subsequent defence – taken from Worlds, Inc., successful patent portfolio defence.

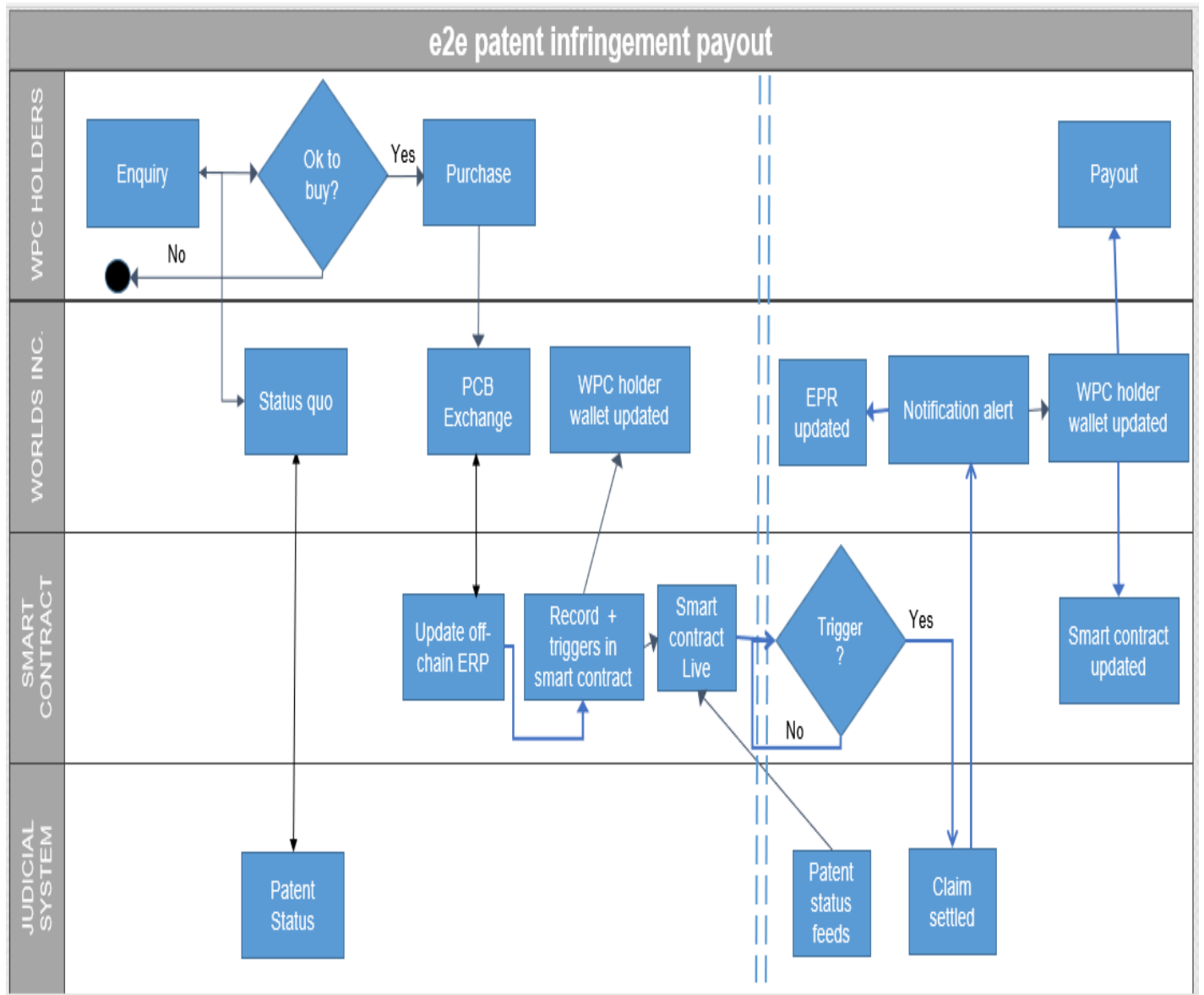


The process depicted above involves a Markman case milestone, which means that the patent appeal was not upheld and the patent will go to a jury for final issuance. Other cases can be less complex, depending on the claim, defence evidence and timing.

Our solution

In the Worlds, Inc, we have a rich history of patents' lifecycle management and we are in a privileged position to have experienced the process depicted above from a success point of view. All that data and know-how accumulated over the years can be made available for an initial data seed in our blockchain platform. This will create an immutable record of Worlds, Inc., patents along with unique timestamps of the patent's public disclosure. This record could be accessible and verifiable by 3rd parties as access will be granted to interested stakeholders. Every time an event that affects the patents' lifecycle occurs, let's say a Markman case, this will be timestamped and recorded on our blockchain. Thus making it traceable and available for future patent material disclosure searches. This verified events' registry greatly simplifies the prosecution and examination phase and reduces cost for both sides. Besides, the inherent transparency enables cross-examination of claims by authorities and 3rd parties. But being transparent doesn't mean insecure or open to unauthorized amendments. Technically, the latter is not possible as blockchain records are immutable. For the security element, we will use standard encryption technology deployed for most public blockchain platform technologies, such as the industry standard SHA256. We will also use standard procedures for verification of KYC information so that inventors' data and other technical information pertinent to a patent's material is vetted before registry.

We will also introduce a functionality that goes beyond registry of Worlds, Inc., patent portfolio on a blockchain: smart contracts for automatic payout of patent litigation proceeds. A typical flow for a WPC's smart contract is depicted below:



In this flow we have the following key entities:

- **WPC holders:** this is an investor or investors who have WPC; acquired via our designated token sale;
- **Worlds, Inc:** this our internal systems, governing the data flow and custody of exchange funds during conversions from fiat to WPC and vice versa;
- **Smart contract:** this the Worlds, Inc., automated process that handles payout when claims are settled;

- **Judicial system:** this is an abstract overarching term we use to include all relevant entities in the judicial system that provide a final and irrevocable verdict on patent infringement litigation claims.

And there are other elements which will be crucial to the automatic execution of our smart contracts:

PCB exchange: Patent Coin Blockchain (PCB) is a company set up to develop all the necessary infrastructure to enable crypto-currency trading and transactions. The PCB entity will develop an exchange which will be used for the conversion of WPC holders' coins to fiat and vice versa.

Triggers: our smart contracts' flow work on alteration of certain trigger conditions in the judicial system. In a blockchain system, these triggers are typically fed into the smart contracts from external data sources, called oracles. For example, an oracle in our case could be a judicial review which grants a patent a Markman status, could trigger a rule that the patents value and percentage of payout should increase as typically patents that get this status are said to have survived the "patent death squad"; practically speaking, means that the patent appeal is not granted and the final verdict will be in the hands of a jury – therefore, closer to the award stage.

The Worlds Patent Coin ICO

To fund the development of WPC, we will have an ICO (Initial Coin Offering) for WPC project tokens. An ICO is an event in which a new cryptocurrency project sells part of its cryptocurrency tokens to early adopters and enthusiasts in exchange for funding. We see this as a transparent and well-respected way to raise funds in order to build WPC. We need development resources and capital for that. Getting all the resources together, however, from developers and marketing personnel to a legal team, designers and many other will require additional funding. In addition, holders of WPC coins have a stake in existing patent infringement litigation cases of Worlds, Inc., hence, a stable route to revenue generation and return on their investment.

We plan to establish a patent coin development company, Patent Coin Blockchain LLC (PCB) with the sole purpose of developing the WPC on the Ethereum blockchain following the popular ERC20 standard. PCB will be a Delaware registered subsidiary of Worlds, Inc., and this is a jurisdiction where corporate actions can now be registered on a blockchain. PCB will also undertake other development tasks as deemed necessary for the successful launch of our WPC ICO as well as marketing campaign management. PCB will coordinate and manage the development and marketing initiative for the proposed ICO under a timeline and budget agreed to by Worlds, Inc.

The target amount for the WPC ICO is currently contemplated at 30,000 to 60,000 ETH (approx., \$12mn to \$24mn with ETH/USD exchange rate at 31st March 2018). The initial issuance of the WPC coin will be inclusive of the current Activision Blizzard litigation, which is already progressing to the final stages. We plan to include further litigation cases as these progress through the judicial system and nearing the award stage. A timed series of events for these litigations can be traced by our explorer system, available to WPC coin holders.

Ultimately, we aim to make it possible for WPC coin holders to own a portfolio of patent litigation holdings. These portfolios will be administered via configurable smart contracts. We will develop those using the proceeds of the WPC ICO as per our roadmap, outlined in the next section.

To seed fund the WPC pool of litigation proceeds, Worlds Inc., will assign 25% of potential net settlement or licensing revenue to PCB from the current litigation against Activision Blizzard and from all future litigation actions.

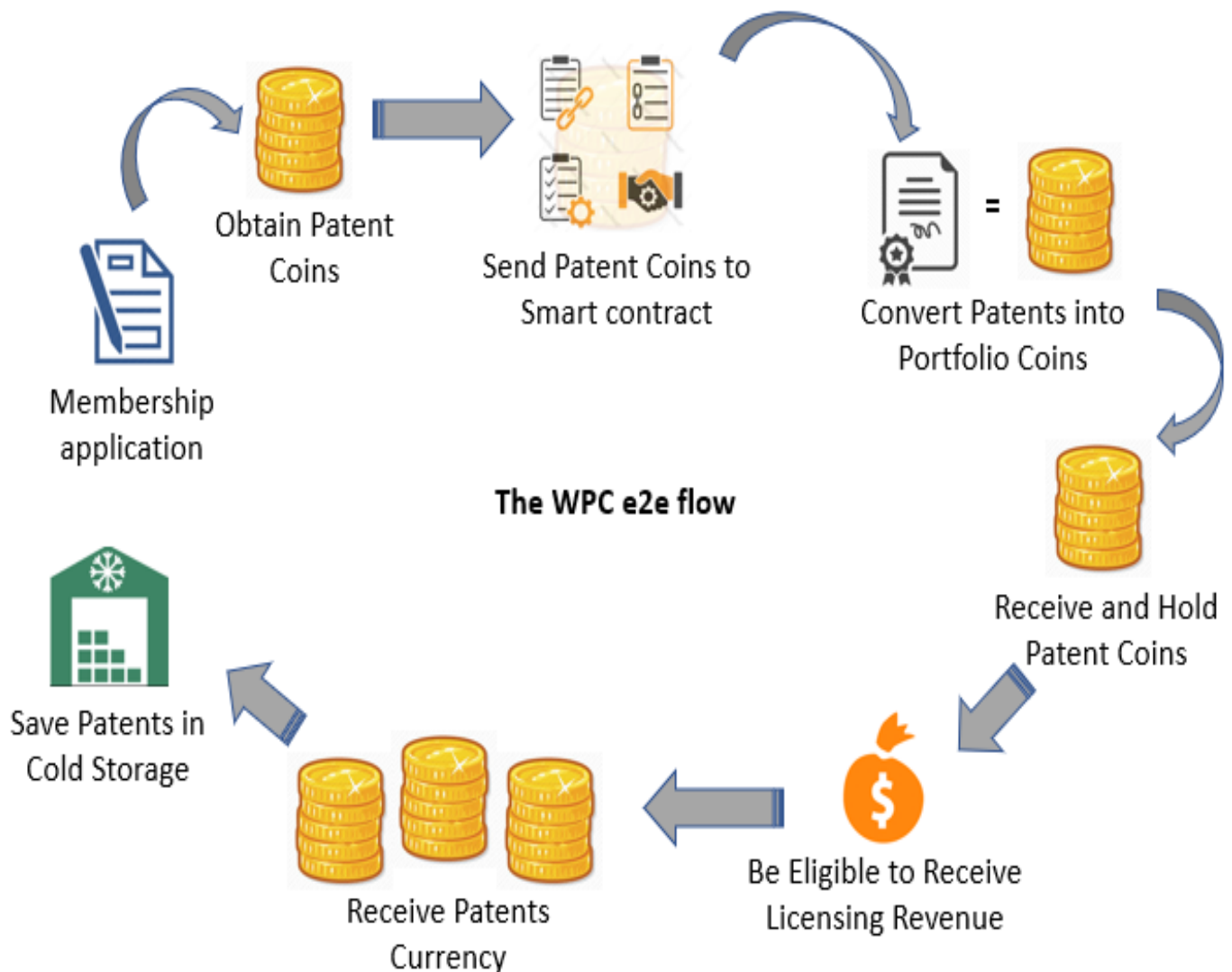
Worlds, Inc., will further receive a 30% equity interest in WPC as well as 75% of funds raised through the WPC ICO. Worlds, Inc., will also receive the equivalent of \$2mn in value of WPC, at the completion of the ICO.

At phase two of the project, PCB will develop a proprietary bespoke blockchain crypto currency platform for the issuance of multiple Patent Coins on behalf of other patent holders representing multiple categories of patents.

Further details of the proposed business association between PCB and Worlds Inc., will follow upon definitive formal binding agreement, targeted to be executed by March 30, 2018 or shortly thereafter.

The ICO Mechanics

In the first phase, WPC ICO will mint coins for a unit price of 1c per WPC. In total, we plan to generate 20 billion WPC coins, of which 5 billion will be reserved for a WPC fund in order to pay for future enforcement of Worlds, Inc., patent portfolio. We do not plan to have a hard cap on the ICO



In the second phase, we will expand WPC coins outreach to other patent portfolios. Additional features, currently under consideration, are the creation of a patent pool that is primarily crowdsourced and dependent on funds' availability. As we anticipate steady growth of our ICO supporters, given the current, positive, steps with the Activision Blizzard litigation process, we foresee a future scenario where the WPC fund is strong enough to begin contemplating acquisition of new patents or further development and enhancement of current patent portfolio. As this is primarily driven by the crowd investors, we will operate a voting mechanism to ascertain and validate which patents are suitable for inclusion to the WPC portfolio.

In the final phase, as with most ERC20 compatible coins we will make WPC tradeable in popular exchanges. We anticipate WPC coins to be listed three months post the official closure of our ICO.

WPC coins primary purpose will be to act as a utility token to grant access to the Worlds, Inc. patent infringement portfolio. That is, you have to have the WPC token in order to participate in an award distribution from a potential win of a patent infringement litigation case. The more tokens the better proportion one gets in a given case. To keep the system fair and enable an ecosystem to grow, WPC token owners will need to surrender a portion of their WPC tokens in order to participate in award distribution for cases. The idea is to restrict controlled access to award distribution by only a fixed, set group of participants. Tokens that are surrendered will be burnt and new ones will be minted and made available for purchase after a litigation case is successful and closed. This will enable participation from more interested parties than the original ICO token buyers.

The proportion of WPC tokens needed for participation will be decided on a case-by-case basis taking into account the potential payout and likelihood of a win. Worlds, Inc. will notify WPC token holders of the litigation case timeline and will issue (mint) specific tokens to be used only in that litigation case. You can imagine these are one-time only, sub tokens, to used specifically against that litigation case. These sub tokens will not be tradable in public exchanges and only sold to WPC token holders. Ownership of that case-specific token entitles one to claim proportion of the award, if the case is successful. The more case-specific tokens one gets, the higher the proportion. However, we will introduce a market stability algorithm to ensure fair distribution and that no case-specific token owner can claim more than 25% of the award allocated for those tokens.

Once the case is decided, and if successful, an award is order, Worlds, Inc. will allocate a portion of the award, currently at 25%, to all the case-specific token holders. Payouts will be processed and executed on the blockchain using smart contracts, and there will be an option for fiat payments via normal routes, such as a payment processor. Entitled owners will need to show and surrender their case-specific tokens in return for the award funds. Worlds, Inc. will collect surrendered case-specific tokens and destroy them as their purpose will be over.

In the chart below we depict a typical scenario where this mechanism is an action:

All WPC minted
\$20,000,000,000

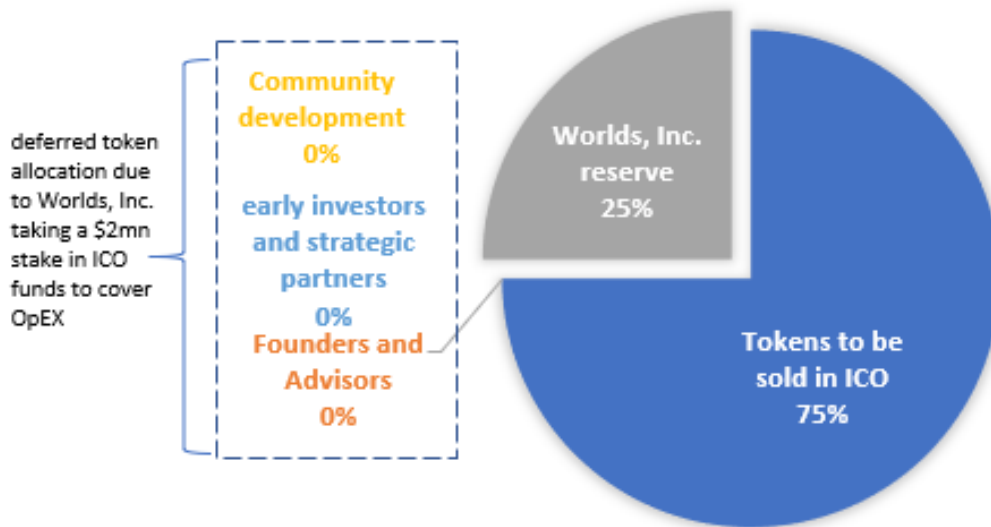
WPC in circulation
\$15,000,000,000

Purchase price at ICO
\$0.01

Scenario #1: WPC buyer gets 5,000 WPC at 0.01c per coin		
Tokens purchased	strike price/token	Total paid
500,000	0.01	\$5,000
Approximately, 8wks prior to a final hearing on the Activision Blizzard case, Worlds, Inc.		
Issues a call-to-action to all WPC token holders and mints 10,000,000 Activision Blizzard case specific tokens (WPC.AB) which are available for sale at a price of 100 WPC per 1 WPC.AB. Minimum strike price of 1,000 WPC.		
A WPC token holder decides to participate and surrenders 100,000 WPC tokens in exchange of 1,000 WPC.AB case specific tokens.		
Activision Blizzard case awarded to Worlds, Inc. at \$287mn		
Court award	Worlds, Inc. allocates 25% to PCB	All WPC.AB tokens minted accumulate value from Activision Blizzard proceeds' apportionment 10 million tokens equally share \$71.7mn
\$287,000,000	\$71,750,000	\$7.175
WPC.AB token holder with 1,000 tokens purchased at 100,000 WPC tokens now gets \$7,175		
1,000	\$7.125	\$7,175

In this scenario we assume that the Activision Blizzard litigation award will be in the region of \$287mn, as per our analysis in sections above. Assuming that one holds 1,000 WPC.AB case specific tokens purchased in exchange of 100,000 WPC tokens, he/she will get a reward of approximately \$7,175 from one litigation case alone. That token holder purchased the 100,000 ICO tokens (WPC) for \$1,000 so he/she made a 7x net return on one single litigation case.

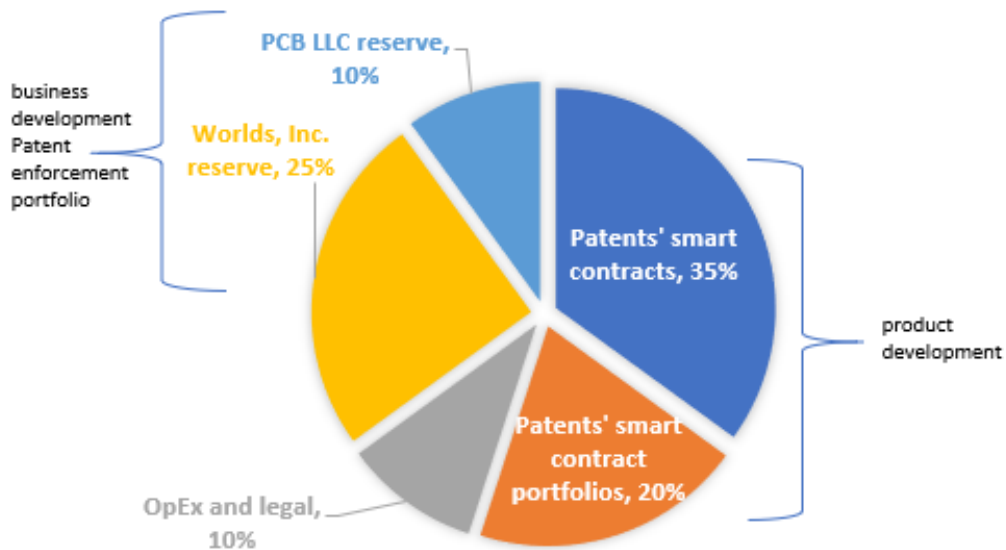
DISTRIBUTION OF WPC TOKENS



Our distribution strategy is solely focused on rewarding crowdfunding stakes as we plan to offer 75% of WPC tokens for sale. Worlds, Inc., will keep a 25% reserve to fund the operations. Community development, rewards for early investors and strategic partners, tokens for founders and advisors are all deferred as Worlds, Inc. will take a fixed \$2mn stake to cover OpEX.

Allocation of Patent Coin ICO funds upon successful raise

ALLOCATION OF FUNDS



Once our ICO is successfully completed, we plan to allocate over half of the funds raised for product development (35% for smart contracts on patent infringement cases; and 20% for further smart contracts' development to manage portfolio of patent infringement cases). Business development, and enrichment of our patent enforcement portfolio will get a 35% allocation and the remaining 10% will cover OpEx and legal expenses.

Technical details of the token sale are summarized below:

WPC Description	
Worlds Patent Coin (WPC) Description	A coin specifically designed to hold intellectual value from shared IP ownership – current portfolio valued at millions of dollars as it is backed by existing patent infringement litigation.
Ticker Symbol	WPC
Start	06 / 01 / 2018, 09:00hrs EST time
End	06 / 30 / 2018, 08:59hrs EST time
Total amount of coins	20,000,000,000
# coins to be sold in ICO for \$0.01	15,000,000,000
# of coins to reserve	5,000,000,000
# of coins to founders and advisors	Deferred due to Worlds, Inc., taking an equity stake in PCB – coins' issuer
# of coins for Marketing, Bounty, Ads, etc.	Deferred due to Worlds, Inc., taking a \$2mn equivalent in WPC ICO funds raised for OpEx
Target Amount sold	60,000 ETH
Project Status	Develop a smart contracts' infrastructure that can handle automatic patent infringement litigation proceeds
Escrow of funds	Funds secured in Multisig escrow account
Early bird bonus	N.A.
Accepted currencies for the ICO	ETH – ERC20

THE TEAM

Thom Kidrin CEO	Michael J. Sivak Director of Production	Bernard Stolar Board of Directors	Robert Fireman Board of Directors	Edward Gildea Board of Directors
Mr. Kidrin is responsible for the general corporate and administrative management, as well as the management of the technology and product development groups in both U.S. and international markets. From 1991 to mid-1996, he was founder and President of The College Television Network, a public company engaged in the design and manufacture of interactive entertainment/ advertising networks in public venues. The College Television Network is the largest private commercial television network on university campuses in the U.S. Mr. Kidrin was the co-founder and a consultant to Motown Interactive, a multimedia publisher for Nintendo and Sega, focused on the development of the first ethnically based entertainment titles emphasizing the integration of music as a predominant gaming element. Mr. Kidrin was the President and	Mr. Sivak has been with Worlds since 1995, when he was hired as an artist for the Starbright Project. During his time with the company, he has built and helped design many of Worlds.com's 3D worlds, including Animal House, HansonWorld, BowieWorld, and Hang. Prior to working for Worlds, he was a freelance computer graphics artist in Los Angeles, doing work for such companies as R/GA, Connectix Corporation, Digital Ranch, and Microsoft. Mr. Sivak received a Bachelor of Fine Arts degree in Illustration from Art Center College of Design in Pasadena, California.	Mr. Stolar has 20 years of experience in the gaming industry. His previous positions include, Executive Vice President of Sony Computer Entertainment America, President and Chief Operating Officer of Sega of America, and President of Mattel Interactive. Stolar assisted in the launch of the Sony Playstation and managed the Sega Saturn and Dreamcast platform launches.	Mr. Fireman is CEO of MariMed Inc. a medical marijuana advisory company spun out of Worlds Inc. Mr. Fireman was the Founder and former Director of SmartSource Direct, Inc., a subsidiary of News America Marketing (News Corp). He was responsible for the full development, of card-based loyalty, financial, and database products and services in retail, grocery and drug store chains encompassing over 50,000 stores throughout the U.S. Mr. Fireman is a practicing attorney.	Edward Gildea was the CEO, President, and Chairman of the Board Of Directors of Converted Organics Inc., a publicly held company that manufactures organic fertilizer by recycling food waste, from January 2006 until June 2013. He was also a lawyer for, and COO of, QualityMetric Inc. (healthcare) from 2000-2005 and Grolier Incorporated (publishing) from 1980-1989. He spent 10 years at the Kellogg Company (1990-2000) as their vice president of legal where he managed and supervised a legal team responsible for executing mergers, acquisitions and divestitures. He is currently a member of the board of directors of Finjan Holdings

Co-founder of American Softworks Corporation, a Nintendo, Sony and Sega third party licensee, and the Executive Director/Project Leader at Mattel Toys, working on the development of the first CD-based video game system.

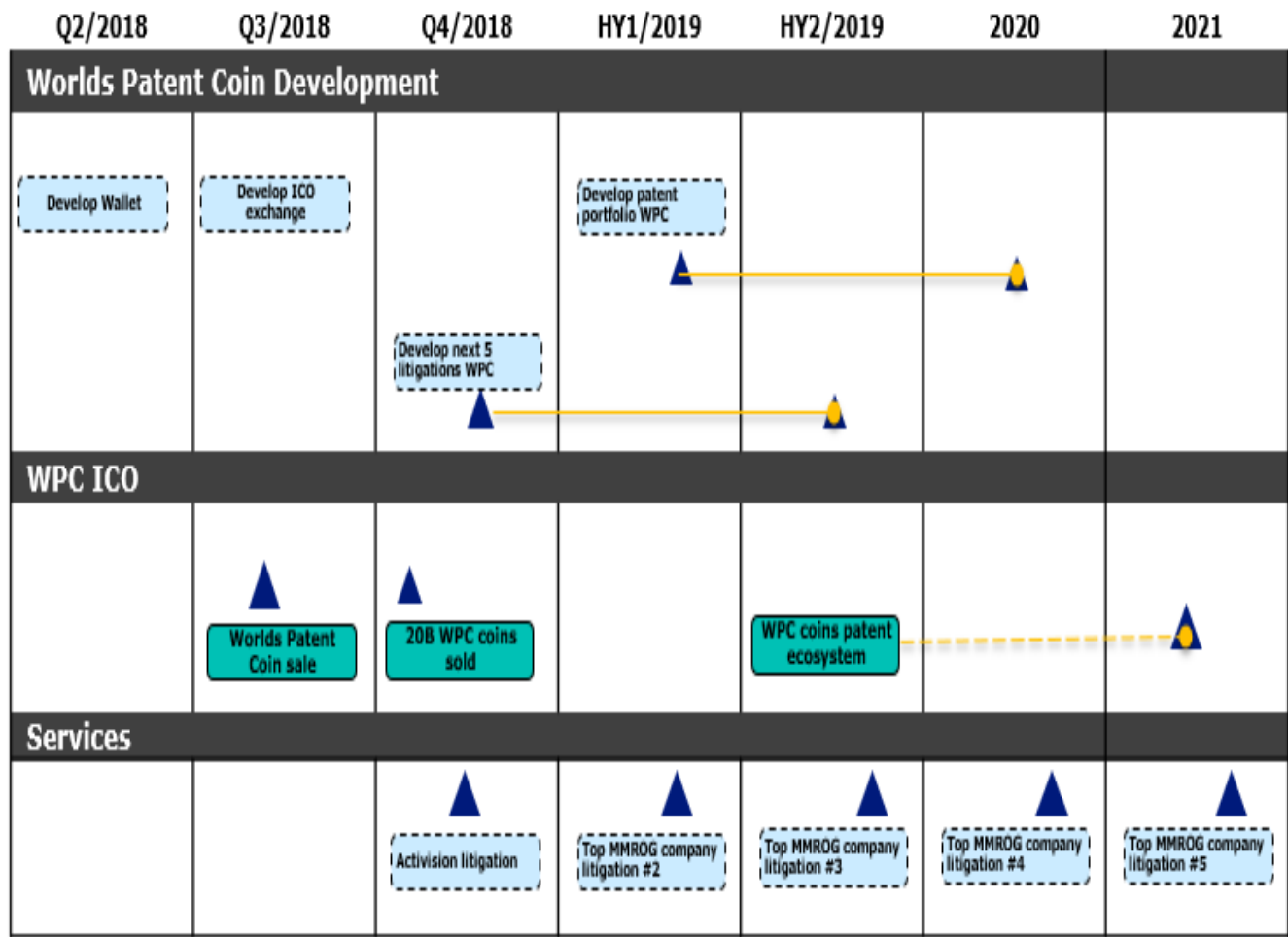
Inc. (Intellectual property security software) and WPCS International Inc. (wireless communications and Bitcoin exchange).

LIABILITIES

Liability category	Description / Scenario	Remedial action
Utility	WPC is a pure play investment that relies on volume of transactions and utility among consumers and patent stakeholders to flourish. In the event that we are not experiencing the growth projected with WPC we might lose customers which will have a negative effect on the WPC project overall.	Ensure clear and transparent onboarding processes are in place with WPC holders and existing patent litigation proceeds are transparent to WPC holders.
Affinity	We are a patents' coins marketplace. We rely on strong and defensible patents in our portfolio as this streamlines our chances for litigation rewards at the court stage,. People need to feel connect to our purpose of protecting and enforcing lawful use of our IP. Our inability to successfully defend our IP could damage our growth prospects and limit our ability to pay out proceeds from litigation cases.	Ensure a workable, dynamically adjusted, operating model that makes adequate provisions for continuous refresh of our IP. Adjust WPC coins issuance and circulation rates, introduce buy backs and keep the market fluid in periods of negative litigation output.
Technology	This is our core strength, but could also be a liability. Smart contracting could be convoluted and opaque to some; digitally assign ownership of a fragment of someone's IP to another party by virtue of a court case outcome is not easy – it poses challenges regarding storage of court events and record keeping in secure custody; safe handling of access keys; automatic pay outs synchronisation with fiat accounts held by the clients.	Ensure we have a technology roadmap, vision and capacity to be ahead of the curve. Engage with the development community and always make sure we have the latest patches, and updates. Use of the latest techniques to ensure confidentiality and privacy of our customers' accounts (nodes) is preserved within the permitted limits of the law.

Patent Coin roadmap

Our tentative roadmap for the WPC development looks as follows:



Our journey, thus far, includes several important milestones which we proudly completed:

1. Q1/2018 – Worlds, Inc., 10 x US patents vetted and prepared for on-loading to the patent blockchain
2. Q1/2018 – Worlds, Inc., completes planning, ICO white paper development and whitelisting of early, seed investors.

Further, plan the following milestones:

3. Q3/2018 – Worlds, Inc., holds it's ICO, the world's first asset-backed patents' ICO
4. Q4/2018- 20 billion patent coins issued and distributed to their stakeholders and Worlds, Inc., for development and patent enforcement program.

5. 1st Half of 2019 – Worlds, Inc., successfully settles Activision Blizzard litigation and prepares another major litigation for MMROG patent infringement.
6. 2nd Half 2019 – Worlds, Inc., patents' ecosystem expands beyond Worlds, Inc., patents.
7. 2020 – 2021 – Worlds, Inc., patent enforcement program counts 5 major litigation successes

APPENDIX

1. References

- [1] "U.S. Patent Statistics Chart Calendar Years 1963 - 2015." U.S. Patent Statistics Summary Table, Calendar Years 1963 to 2014, 06/2015 update
https://www.uspto.gov/web/offices/ac/ido/oeip/taf/us_stat.htm
- [2] "35 U.S. Code Part I - UNITED STATES PATENT AND TRADEMARK OFFICE." LII / Legal Information Institute. <http://www.law.cornell.edu/uscode/html/uscode35/us>
- [3] "IP Facts and Figures", WIPO, 2016 -
http://www.wipo.int/pressroom/en/articles/2016/article_0017.html
- [4] "How much does a patent cost? | Richards Patent Law Firm." Richards Patent Law.
<https://www.richardspatentlaw.com/faq/how-much-does-a-patent-cost/>
- [5] "2017 PwC Patent Litigation Study"
<https://www.pwc.com/us/en/forensic-services/publications/patent-litigation-study.html>
- [6] "Schumpeterian Profits and the Alchemist Fallacy Revised", W.Nordhaus, 2005,
<https://ideas.repec.org/p/ecl/yaleco/6.html>
- [7] "IBM Corporation (2010) An Overview of the Critical Importance of IP and IP Analysis."
http://www.tiec.gov.eg/backend/Presentation%20Files/01122010_IPCD_IBM%20Presentation%20Excerpt.pdf
- [8] "Patent licensing and the emergence of a new patent market", Watanabe,Y., 2008, Houston Bus. & Tax LJ, 9, 449, 445-479
- [9] "The Changing Face of Innovation", WIPO, 2011,
http://www.wipo.int/edocs/pubdocs/en/intproperty/944/wipo_pub_944_2011.pdf

- [10] “The Benefits of Transparency Across the Intellectual Property System” M.Lee, USPTO ,
<https://www.uspto.gov/about-us/news-updates/benefits-transparency-across-intellectual-property-system>
- [11] “Who owns the world patents: why patent data accuracy is a problem worth solving”, OroPO, 2015, http://oropo.net/oropo_report_20150615.pdf
- [12] “MMO Games Market to 2025 – Global Analysis and Forecast by Genre, Platform and Revenue Model”, The Insight Partners, 2017, <http://www.theinsightpartners.com/reports/mmo-games-market>
- [13] “AR and VR: the promise and peril of immersive technology”, World Economic Forum, 2017
<https://www.weforum.org/agenda/2017/09/augmented-and-virtual-reality-will-change-how-we-create-and-consume-and-bring-new-risks/>
- [14] “Virtual and Augmented Reality: Understanding the race for the next computing platform”, Goldman Sachs, Profiles in Innovation, 2016,
<http://www.goldmansachs.com/our-thinking/pages/technology-driving-innovation-folder/virtual-and-augmented-reality/report.pdf>
- [15] “Smart Contracts in Financial Services: Getting from Hype to Reality”, Cap Gemini, 2016,
<https://www.capgemini.com/consulting/resources/blockchain-smart-contracts/>
- [16] “Why you pay what you pay for video games”, Kotaku, 2015,
<http://www.kotaku.co.uk/2015/09/30/why-you-pay-what-you-pay-for-video-games>
- [17] “Why don’t more game developers see royalty rates from their work”, ArsTechnica, 2012,
<https://arstechnica.com/gaming/2012/02/why-dont-more-game-developers-see-royalties-from-their-work/>

2. Potential infringers and probable infringement revenue

Publisher	Game	Strict Infringement Probability	Units Sold (M)	Released	In-game Revenue	Probable Infringing Revenue
Activision	Call of Duty: Ghosts	99%	10.27	5-Nov-2013		\$3,893,000,000
Take-Two Interactive	Grand Theft Auto V	99%	14.42	17-Sep-2013		\$2,915,000,000
Tencent	CrossFire	99%			\$957,000,000	\$2,783,000,000
Electronic Arts	Battlefield 4	99%	4.11	29-Oct-2013		\$1,385,000,000
Wargaming.net	World of Tanks	99%			\$372,000,000	\$1,082,000,000
Ubisoft	Assassin's Creed IV: Black Flag	99%	3.09	29-Oct-2013		\$1,041,000,000
Activision	World of Warcraft: Mists of Pandaria	99%	0.75	25-Sep-2012	\$213,000,000	\$981,000,000
Activision	Call of Duty: Black Ops II	99%	12.79	13-Nov-2012		\$657,000,000
Warner Bros. Interactive Entertainment	Batman: Arkham Origins	99%	1.89	25-Oct-2013		\$599,000,000
Electronic Arts	Star Wars: The Old Republic	99%	1.37	20-Dec-2011	\$139,000,000	\$465,000,000
Valve	Team Fortress 2	99%			\$139,000,000	\$404,000,000
Microsoft Game Studios	Halo 4	99%	6.17	6-Nov-2012		\$375,000,000
Electronic Arts	Need for Speed Rivals	99%	0.81	15-Nov-2013		\$374,000,000
Valve	Counter-Strike Online	99%			\$121,000,000	\$352,000,000
Sony Computer Entertainment	Gran Turismo 6	99%	0.41	6-Dec-2013		\$348,000,000
Microsoft Game Studios	Forza Motorsport 5	99%	0.54	22-Nov-2013		\$299,000,000
Disney Interactive Studios	Disney Infinity	99%	1.83	18-Aug-2013		\$288,000,000
Sony Computer Entertainment	Killzone: Shadow Fall	99%	0.55	15-Nov-2013		\$254,000,000
Microsoft Game Studios	Dead Rising 3	99%	0.40	22-Nov-2013		\$222,000,000
Microsoft Game Studios	Ryse: Son of Rome	99%	0.39	22-Nov-2013		\$216,000,000
Deep Silver	Saints Row IV	99%	1.23	20-Aug-2013		\$196,000,000
Microsoft Game Studios	Minecraft	99%	1.70	4-Jun-2013		\$189,000,000
Sony Computer Entertainment	The Last of Us	99%	1.70	14-Jun-2013		\$180,000,000
Take-Two Interactive	Red Dead Redemption	99%	6.88	11-Oct-2011		\$180,000,000
Linden Lab	Second Life	99%			\$47,700,000	\$151,000,000
Square Enix	Final Fantasy XIV: A Realm Reborn	99%	0.78	27-Aug-2013		\$131,000,000
Gearbox Software	Borderlands 2	99%	2.77	18-Sep-2012		\$125,000,000
Ubisoft	Far Cry 3	99%	2.10	4-Dec-2012		\$114,000,000
Ubisoft	Tom Clancy's Splinter Cell: Blacklist	99%	0.70	20-Aug-2013		\$112,000,000
Nintendo	Mario Kart 7	99%	3.57	4-Dec-2011		\$100,000,000
Square Enix	Tomb Raider (2013)	99%	1.25	5-Mar-2013		\$88,000,000
Electronic Arts	LEGO The Lord of the Rings	99%	1.44	13-Nov-2012		\$74,000,000
Microsoft Game Studios	Gears of War: Judgment	99%	0.83	19-Mar-2013		\$70,000,000
Sony Computer Entertainment	Uncharted 3: Drake's Deception	99%	2.60	1-Nov-2011		\$70,000,000
Sony Computer Entertainment	God of War: Ascension	99%	0.95	12-Mar-2013		\$69,000,000
Electronic Arts	Dead Space 3	99%	0.92	5-Feb-2013		\$59,000,000
Deep Silver	Dead Island: Riptide	99%	0.59	23-Apr-2013		\$50,000,000
Electronic Arts	Crysis 3	99%	0.74	19-Feb-2013		\$50,000,000
Electronic Arts	Medal of Honor: Warfighter	99%	1.00	23-Oct-2012		\$49,000,000

3. Calculation of apportionment for Worlds, Inc., estimated damages

Unreal Engine 4 features – assuming a 15% royalty on worldwide gross sales

Avatar Filtering	Game Play (consumer)	Graphics (consumer)	Technical (Game Dev Tool)	Virtual Reality
<ul style="list-style-type: none"> Robust Multiplayer Framework (RMF) 	<ul style="list-style-type: none"> Advanced AI Unreal Audio Engine 	<ul style="list-style-type: none"> Photoreal Rendering in Real Time VFX & Particle Systems Film-Quality Post-Process Effects Flexible Material Editor Extensive Animation Toolset Sequencer: State-of-the-Art Cinematics Terrain & Foliage 	<ul style="list-style-type: none"> Content Browser Seamless Perforce Integration Marketplace Ecosystem Limitless Extensibility Full C++ Source Code Included Blueprints: Create without Coding 	<ul style="list-style-type: none"> Full Editor in VR Mode Built for VR, AR and XR

Formula for calculating Worlds, Inc., patented technology using Unreal Engine 4 (UE4) and Robust Multi Layer Framework (RMF) features

Scenario 1: Assumes patent claims construed to cover entirety of RMF technology feature as commercial embodiment

- o Apportionment: 20% to 25% (i.e., RMF assumed to be 20% to 25% of UE4)
- o Royalty Rate: 5% to 15% (i.e., 20% to 25% Apportionment x 15% UE4 Royalty Rate)

Scenario 2: Assumes patent claims construed to cover “filtering up to a set maximum number of avatars” – i.e., some portion of RMF is commercial embodiment

- o Apportionment: 20% to 25% (i.e., “filtering ... avatars” assumed to be 20% to 25% of RMF)
- o Royalty Rate: 5% to 15% (i.e., 20% to 25% Apportionment x 5% to 15% Scenario 1 rate)

