



DHS
DECENTRALIZED WIFI SHARING

WHITE PAPER

DECENTRALIZED WIFI SHARING



CATALOG



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1. EXECUTIVE SUMMARY



1.0 EXECUTIVE SUMMARY

The internet has changed how businesses operate and how consumers behave. Modern lifestyles have evolved to revolve around the internet. We use the internet to stay updated on the latest news, communicate with people, watch videos, play games, and look up directions. We can send data from one country to another in a matter of seconds, allowing business to be conducted from any corner of the world and information to go global in real time.

With the increasing reliance on internet for almost every aspect of our daily lives, Wi-Fi and mobile data have become a necessity. But despite the explosive growth and reliance on wireless connectivity, a portion of world's population are still unable to access internet. Not only that, even users with internet connectivity are restricted by data limits and borders, where users are penalized with high data overage fees and astronomical roaming fees. Even with the current state of free Wi-Fi hotspots, users are obstructed by annoying advertisements, signing in with personal information to access the free internet connectivity, and sometimes even risking getting their devices infected with malware.

DWS hopes to solve these problems through blockchain technology. DWS hopes to foster a global community of Wi-Fi owners, users, and advertisers through establishing Wi-Fi as a tradable asset, incentivized through DWS tokens.

DWS Protocol Foundation Limited (DWS Protocol), based in Singapore, was set up in 2018 to revolutionize the global Wi-Fi sharing ecosystem with blockchain technology. DWS hopes that through this, our community can make instantaneous and secure Wi-Fi connectivity accessible all over the world.



2. PROJECT

BACKGROUND



2.0 PROJECT BACKGROUND: WI-FI



Wi-Fi is a wireless networking technology which uses radio waves to provide network connectivity. In simpler terms, it is also known as the wireless connectivity that allows mobile phone, laptop, or tablet device to be connected to the internet wherever you are.

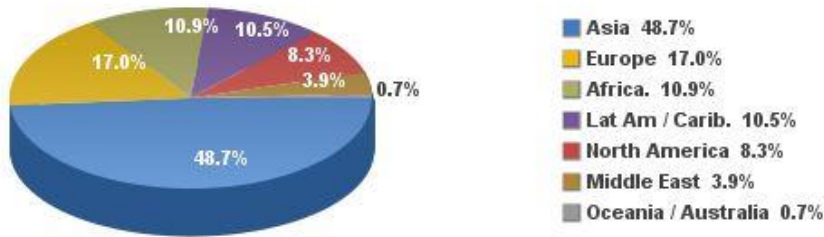
With a wireless transmitter or hub, devices can receive information from internet via Wi-Fi. A router transforms information into radio waves and emits it, creating a small area around itself. Devices will be able to receive these radio signals within the small area if they are fitted with the relevant technology or suitable wireless adapters. This small area is known as the Wireless Local Area Network (WLAN). As radio signals are not very strong, Wi-Fi signals do not travel very far.

Mobile phone technology has advanced rapidly over the past few decades. With the invention of the smartphone, we are no longer bound to our computers when we want to access to the internet. Instead we can use our mobile phones to stay online anywhere and everywhere all the time.

With the rise of the internet of things, we are connected to the internet through countless gadgets we use for every aspect of our lives. But even as internet technology development surges forward, over four billion of the world's population still have no access to internet while those who have access to it are required to pay unreasonable fees for it.



Internet Users in the World by Regions - December 31, 2017



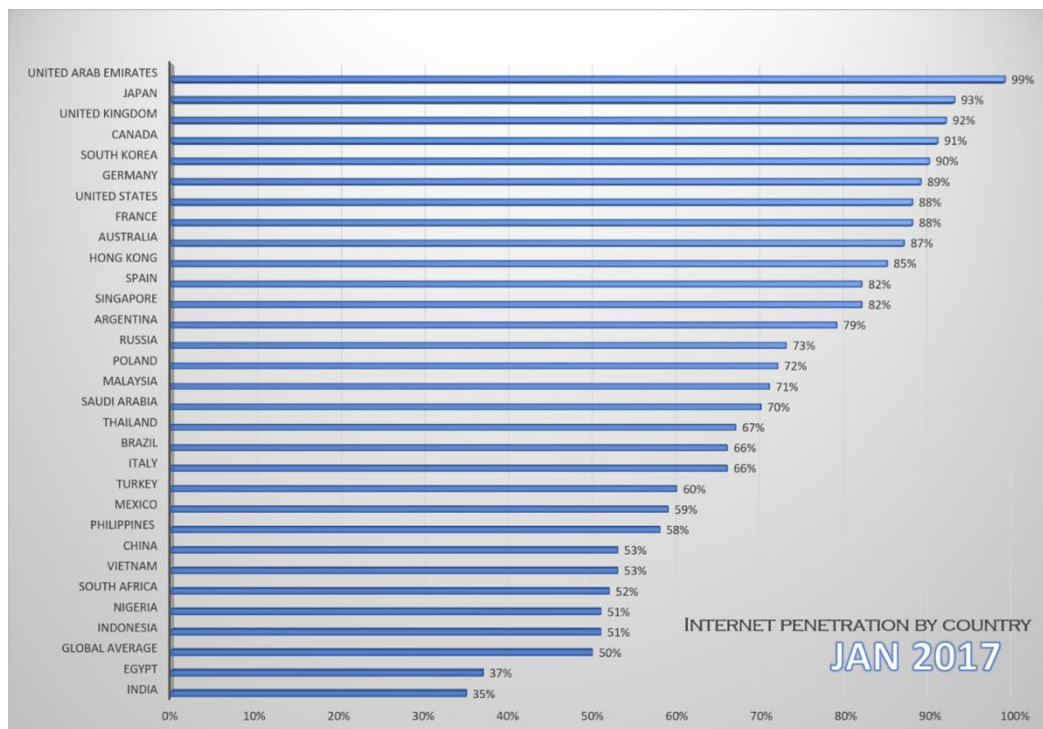
Source: Internet World Stats - www.internetworldstats.com/stats.htm

Basis: 4,156,932,140 Internet users in December 31, 2017

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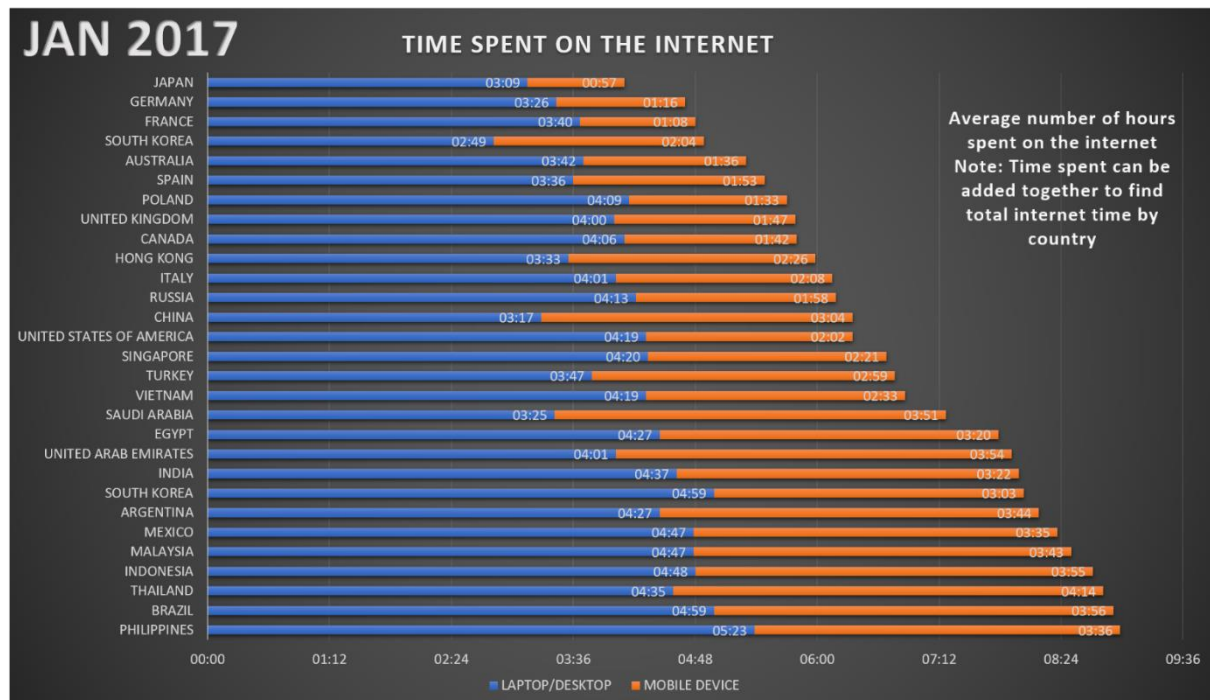
Based on the UN Report on Global Broadband Progress from September 2017, the world's internet users totaled 3.58 billion. Almost 50% of internet users come from Asia, making up a huge share of global internet users.

Therefore, Asia has a great demand for wireless connectivity. In Singapore, at least 82% of the population have access to the internet. Internet penetration is close to 100% in United Arab Emirates, which ranks number one. Internet penetration remains low on South Asia and Sub-Saharan Africa where fewer than one in three people have access to the internet.





The global average of internet penetration is at 50%, which means half of the world is still in the dark when it comes to internet connectivity. Japan, Canada, United Kingdom and South Korea have high internet penetration, with rates sitting above 90%. Seven countries are well above 80%.



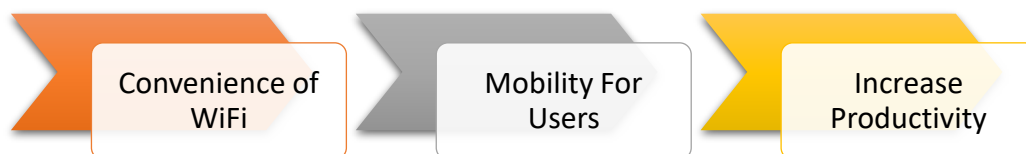
When it comes to the average number of hours spent on the internet, nine countries, mostly developing countries, spend more than eight hours on the internet each day. Internet use in these countries is primarily through laptop/desktop. The Philippines averaged the highest number of hours on the internet, with at least 5 hours on the laptop/desktop and three hours on the mobile phone. Brazil, Thailand, and Indonesia follow closely behind.



2.1 Advantages of Wi-Fi

The internet plays a large role in driving economic and job growth in developing economies and sustaining economic and job growth in developed countries. However, lack of Wi-Fi coverage restricts worker mobility. By increasing accessibility to internet anytime anywhere, users can remain connected to internet constantly, giving them more freedom of movement and economic opportunities. This creates a ripple of productivity as users are able to access and complete their required work.

Based on the statistic above, Singaporeans spend an average of four hours on internet via their laptop/desktop. This also shows that Singaporeans are spending more time on their laptop/desktop rather than their mobile phone.



Unlike wired networks, a sudden increase in the number of users would not require any additional wiring. This provides flexibility to users as well.

Wi-Fi functionality is easy to integrate into mobile computing devices and is now being used worldwide in devices such as PCs, laptops, cameras, printers, and more.



2.2 Increase in Market Demand

The global internet service provider industry (GISP), the main source behind Wi-Fi's spread across the world, is growing at breakneck pace. With the rapid advancements in technology, infrastructure, and services, multiple solutions for internet accessibility in our daily lives and businesses have emerged. These solutions have modified businesses operations and user behaviors.

The figure below shows just how rapidly GISP companies are growing. It also entails the centralization of Wi-Fi companies, as more business will go to these select GISP companies.

The diagrams below depict two growth trends. The first one is the growth trend of Wi-Fi, both for public and private Wi-Fi Network. The next graph extrapolates the growth of Global Internet Service Provider (GISP) companies in the next few years.

Diagram 1: Growing number of Public & Private Wi-Fi globally.

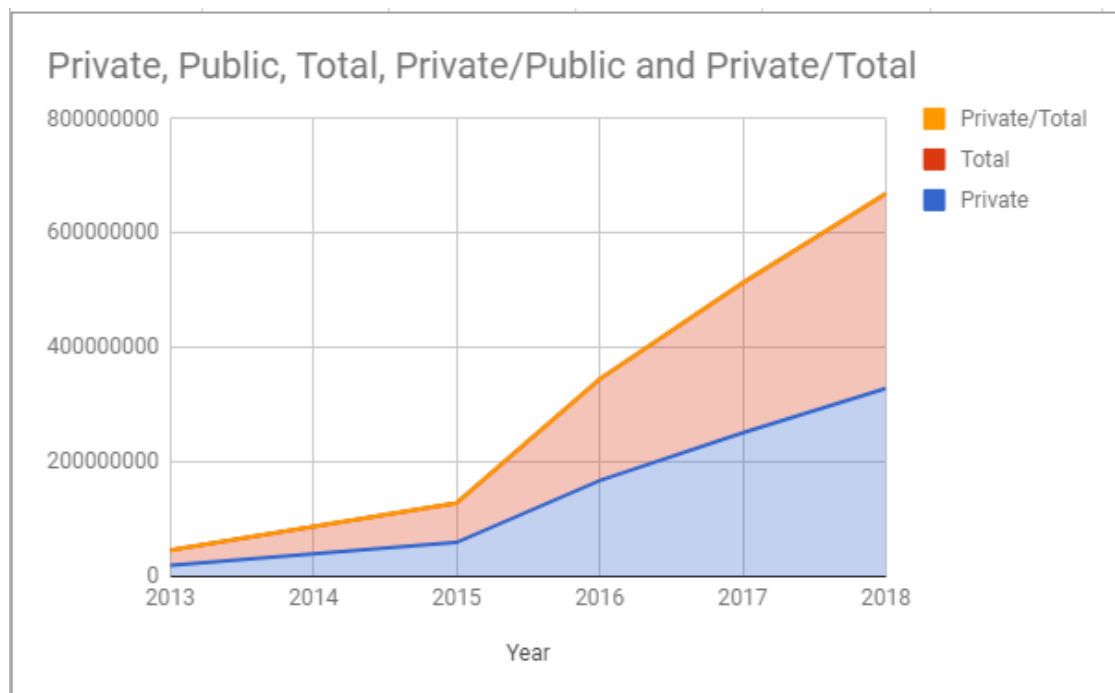


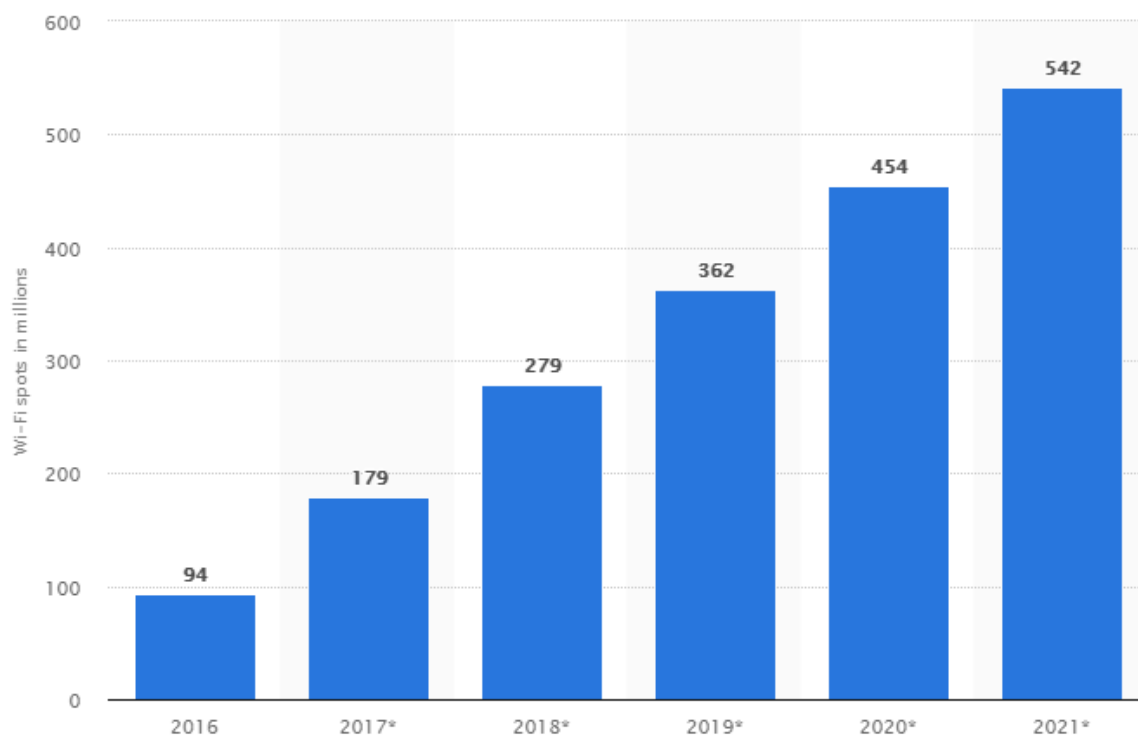


Diagram 2: Growing number of Global Internet Service Provider '000

Global ISP – Market Growth



In every corner of the world, Wi-Fi remains indispensable for users of mobile phones and portable electronic devices such as tablet and laptops. Even with advanced mobile data network connectivity, more and more users are relying on public hot-spot network for Wi-Fi. Today, there are roughly 279 million Wi-Fi hotspots available around the world. The graph below depicts that these numbers will continue to rise steadily. By the end of 2021, there will be an estimated total of over 542 million Wi-Fi hotspots all over the world.





3. CURRENT ISSUES



3.0 PROBLEMS & DISADVANTAGES OF WI-FI CURRENTLY

With the rising popularity of Wi-Fi connectivity and hotspots, there are many challenges that come from the centralized Wi-Fi provider model that exists currently.

Lack of Security:

When it comes to the internet, security is always at the forefront, with potential threats of data breach, viruses, and other threats. Full security is often difficult and challenging to achieve primarily because Wi-Fi connection is wireless in nature. It requires proper security authentication protocols and configurations. To combat this security issue, wireless networks may choose to utilize some of the various encryption technologies available. Some of the more commonly utilized encryption methods, however, are known to have weaknesses that a dedicated adversary can compromise

Limited Range:

The typical range of a common 802.11g Wi-Fi network with standard equipment is on the order of tens of meters. While this kind of range is sufficient for a typical home or small space, it will be insufficient for a larger space. In order for users to obtain additional range, repeaters or additional access points will have to be purchased and installed. This results in additional costs, which can quickly add up.

Reliability of Connection:

Like any radio frequency transmission, wireless networking signals are subject to a wide variety of interference, as well as complex propagation effects that are beyond the control of the network administrator.



Wi-Fi devices are fully functional when they are within the range of AP and receiving good signal strength. Wi-Fi access is limited to about 30 to 100 meters (i.e. 100 to 300 feet).

Limited Speed:

The speed on most wireless networks (typically 1-54 Mbps) is far slower than even the slowest common wired networks (100Mbps up to several Gbps).

Low Data Transfer Rate:

Data transfer rate decreases (to individual computer) when number of clients or computers connected with Wi-Fi network increases.

Resource Underutilization & Redundancy:

As predicted by www.ipass.com, the number of worldwide Wi-Fi hotspots is estimated to reach over 328 million by end of 2018, which means on average, every 23 people globally will share one Wi-Fi hotspot. This figure is expected to be much higher in developed regions. Considering the rapid development of 5G technology and market penetration of current 4G technology, each WI-FI router would be expected to have higher capacity to support a bigger user base and geographic coverage.

From a resource utilization perspective, this is a huge underutilization of Wi-Fi. 92.5% of global Wi-Fi hotspots belong to private households, with only 2-3% belonging to business locations. Professionals only spend 8-16 hours daily at home, half of which are for sleeping. Similarly, 50%-70% of the time, an office is empty. This results in hardware devices and data plan underutilization, during off-peak hours.

On the other hand, peak-hours at business locations may result in internet “traffic jams” due to high demand of data volume and speed. Thus private Wi-Fi subscribers would probably choose their data subscription based on the bottleneck during peak-hour, resulting in more unused Wi-Fi capacity during off-peak hours.

Therefore, we believe a more flexible and dynamic WI-FI network is necessary.



3.1 Challenges Faced by Wi-Fi Internet Users

Availability of Wi-Fi:

One of the most common challenges consumers face is a lack of open Wi-Fi networks available to connect to. For many places in the world, especially in developing countries, the availability of internet, let alone Wi-Fi, is scarce. Those that are available are usually private and locked, rendering them impossible to connect to.

Even in places with fast mobile Internet infrastructure such as LTE there are some common challenges: LTE Internet has limitations on the maximum tra-c, speed, and it is generally more expensive. For the average tourist or traveler, using LTE Internet in roaming is prohibitively expensive. And as such, they are the first group of people who are likely to search out for the free Wi-Fi hotspots.

Cost of Using Internet:

In the real world of centralized Wi-Fi network access and usage, cost will always be a disadvantage for users. Wi-Fi networks are usually offered by telecom companies who will pass the cost onto the users. Because Wi-Fi is so expensive, users tend to not share their Wi-Fi willingly.

Rigid Billing Process:

Most operators charge individual Wi-Fi service subscribers on a monthly/yearly fixed base fee plus incremental charge model. The monthly cost of residential Wi-Fi Broadband Service in the world ranges from few USD dollars to hundreds of USD, with an estimated average of 30-40 USD monthly. Telecom operators spend a substantial amount of their budget on building billing systems and customer services systems to settle utility bills. Due to the technical limitations and cost involved in maintaining and updating the system, the billing system lacks sufficient flexibility for an on-demand billing approach.



No Option of Earning While Having Wi-Fi:

In the current situation, there are no incentives for Wi-Fi network owners and users to share their Wi-Fi. This is one of the major reasons why most Wi-Fi network remains private and locked.

Poor User Experience in Public Wi-Fi Services:

Wi-Fi access isn't always as straightforward as arriving in a location and getting online. According to a survey conducted by www.ipass.com, nearly seven out of ten mobile professionals (68 percent) say that they have decided against using a Wi-Fi hotspot service simply because the registration process was overly frustrating or time-consuming. Given the importance of Wi-Fi connectivity, this could have a significant impact on worker productivity in the short and long term. The numbers bear this out. Nearly 20 percent of mobile professionals estimate they miss more than three hours of working time a week not being able connect to the internet—that's 156 hours a year, nearly a full working month. Perhaps it's no surprise, therefore, that nearly half of respondents said that they would be more likely to join a prospective employer if they offered global Wi-Fi access as a perk for all employees.



4. INTRODUCING BLOCKCHAIN



4.0 INTRODUCING BLOCKCHAIN TECHNOLOGY –

HOW WILL WI-FI BE ENHANCED BY BLOCKCHAIN



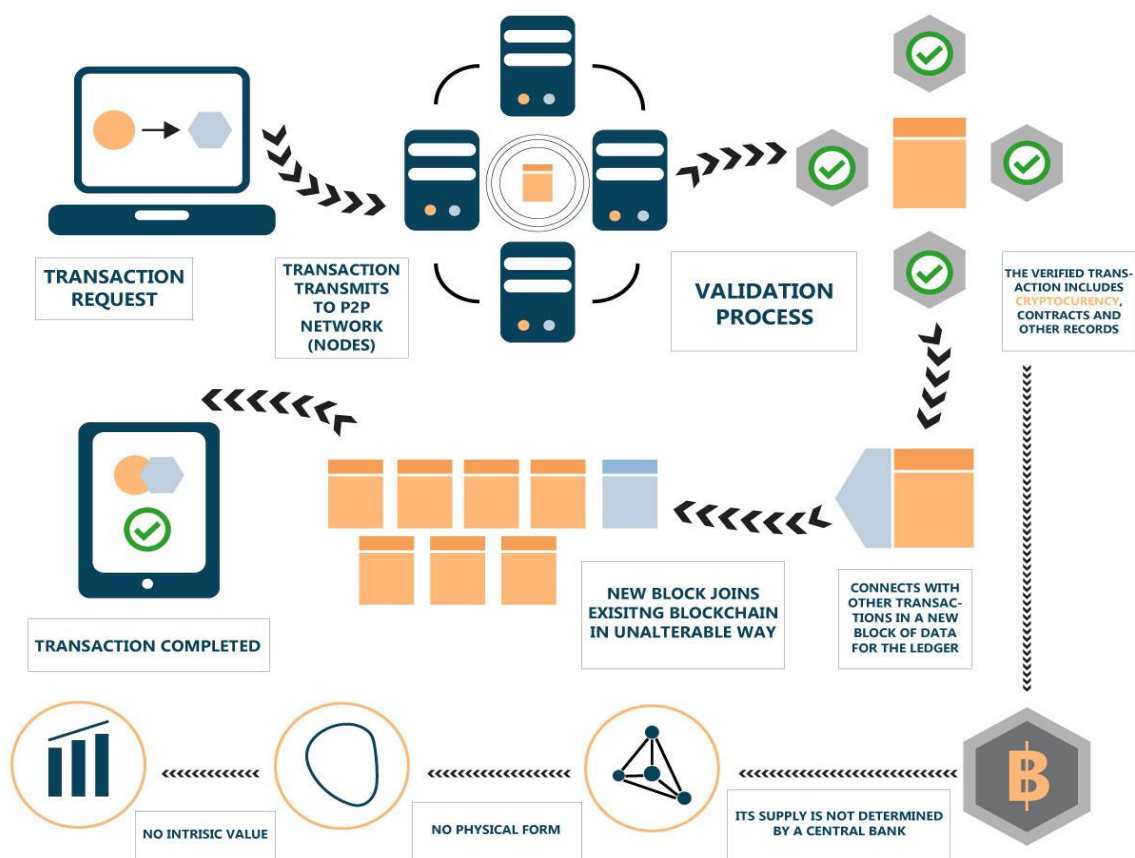
A blockchain is a digital ledger of transactions of database that record virtual financial transaction known as cryptocurrency. Blockchain technology has created a system that allows digital information to be distributed in virtual digital currency, originally devised for Bitcoin. The tech community has been looking for more potential uses for this technology. Information held on blockchain are shared, the public can view information, and no centralized version of information exists; it is hosted by millions of computers simultaneously and data is transparent and easily accessed by anyone on the internet.

The technology of blockchain durability is identical to the internet, by storing massive amounts data of information across its network, the blockchain cannot simply be controlled by one single entity.



While bitcoin was invented in 2008, the technology of blockchain has operated without any significant disruption or failure.

A decentralized technology system is made up of a global network of computers that jointly manage the digital database that records cryptocurrency transaction, with no central authority meaning the entire system operates on peer to peer basis.





4.1 Advantages of Blockchain

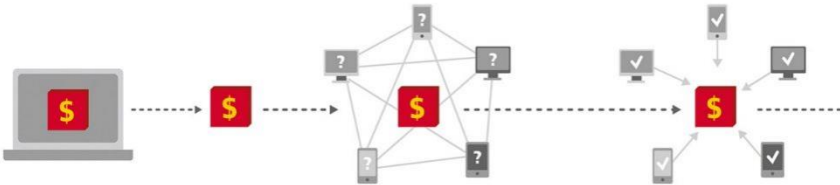
The use of blockchain by enterprises and consumers could benefit everyone; unlike banks that monitor transactions with traditional currencies, blockchain allows for the free transfer of cryptocurrencies. This data is interlinked by a network of computers, owned and run by the users themselves.

Blockchain offers the benefit of traceability and cost-effectiveness. When it comes to Supply Chain Management, blockchain can be used to track the movement, origin, and quantity of goods. In terms of a B2P ecosystem, the processing system renders ownership, transfer and production process, and payments transparent.

Blockchain assists with quality assurance. Records leave a highly traceable audit trail, guaranteeing the accuracy of records. If a mistake has been made, the blockchain system is able to easily trace and identify the mistake to its origin, making it easier for business to carry out investigations and take the necessary actions. This ease of tracing accountability deters human error and the tampering of data.

Drafting traditional business contracts can be time consuming; it is often a bottleneck for the growth of a business, especially for big firms that constantly communicate with others on a regular basis. With blockchain technology, smart contracts allow agreements to be automatically validated, signed, and enforced without the need of an advocate or intermediary.

Peer to peer (P2P) global transactions enable fast, secure, and efficient transfer of funds across the world. P2P transactions such as PayPal process international payments usually for a small transaction fee. Other P2P payment platform services may have limitation such as location restrictions and minimum or maximum transfer amounts. The use of Blockchain and cryptocurrency allows users to transfer and make payments without any restrictions.





4.2 How Blockchain Will Benefit WI-FI

Many issues facing Wi-Fi can be solved by implementing a blockchain platform system to share Wi-Fi, through the use of a decentralized Wi-Fi network system based on private, mostly residential, routers. Hosts can share excess broadband capacity with outside guests to earn cryptocurrency.

Furthermore, internet users may also be able to access Wi-Fi for free by viewing a short advertisement. For each ad response, the advertiser will pay the owner of the Wi-Fi router directly.

How It Works:

Guest User – Connect to open Wi-Fi hotspot, and either (a) pay the Wi-Fi router owner on an on-demand basis and settle the payment automatically via a smart contract set by the router owner or (b) read an ad banner or watch an advertisement to use the internet for free.

Owner of Wi-Fi Router – Utilize your excess Wi-Fi capacity to earn tokens from advertisers and guest users for opening up your Wi-Fi network to the public.

Advertiser – Expand your advertising reach and increase the accuracy of your ad targeting through a decentralized network of Wi-Fi owners and pay them directly for ad responses.

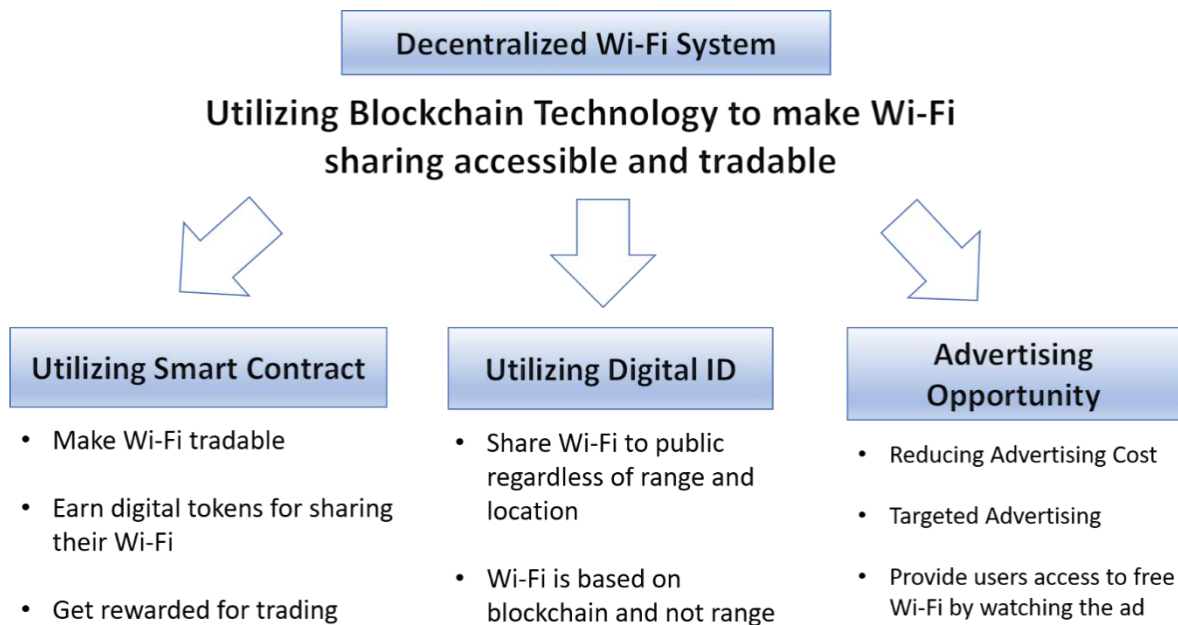
Blockchain technology provides fast and economical transactions between parties to ensure clear agreements by utilizing smart contract technology, while advertisements shown are also traceable and targeted with the use of blockchain technology.



5. ABOUT DWS



5.0 DWS NETWORK STRUCTURE BASED ON BLOCKCHAIN



DWS Protocol is based on blockchain for the network core layer. In the protocol, DWS will utilize a hybrid model multi-layer blockchain consisting of its own DWS-Chain and partnering public chains such as QLC Chain and Neo.

This hybrid model of multi-layer blockchain serves two primary functions. First, the blockchain stores records and details of transactions between asset (router) owners and users on a ledger, and secondly, the blockchain also deploys and executes smart contracts.

A DWS Chain **smart contract** is an algorithmic contract deployed between asset (router) owner and users. This smart contract will establish the trade rules and also automatically generates and executes transactions through it.

DWS Protocol will use a third-party public chain network such as Neo for telecom asset registration.

This setup will allow a user to access the router owner's Wi-Fi via DWS protocol without the need to personally know who the router owner is. The user simply has to pay the router owner



in tokens via DWS based on the length of time they are connected. Thus, this is termed trading. These trading terms will be written into a smart contract which automatically executes terms of the smart contract through the DWS platform without any manual intervention.



5.1 Asset Level: Utilizing Digital Asset & Digital ID

With the rapid development of internet, electronics, and computers, online commerce has grown tremendously, giving birth to many business and trading opportunities online. However, the trading rules online are mostly governed on a domestic level where rules breakers or offenders are punished according to each individual country's law. When trade happens on a global level between individual parties who don't know each other, how can both parties trust each other if both parties don't know who the other person is, or which country's law will be followed if an agreement is broken? How do we find the person who broke the agreement? This is a big problem for global Wi-Fi sharing.

To address this, DWS Protocol will draw on NEO Smart Economy platform resources. DWS Protocol will integrate the Digital Asset, Digital Identity, and Smart Contract functionalities, utilizing the NEO platform as a top-level partner on a level 1 blockchain partnership. DWS will also integrate future NEO features such as cross-chain protocol, quantum-resistant cryptography, a distributed storage protocol, and a secure communication protocol.

NEO Smart Economy is the next generation of trade, where trade agreements are written in programming code using a Smart Contract. The Smart Contract is stored in a decentralized immutable Blockchain and will be executed precisely to the terms of the trading agreement, and precisely at the time agreed upon. This allows for an economy where two or even thousands of parties can agree on a contract without the need to trust each other. The Smart Contract will always execute according to the defined terms laid out in the contract.

Digital Assets

The main objective of NEO is to enable a Smart Economy. To achieve this, NEO's technology allows digitizing any real asset into digital assets. Digital assets are programmable assets that exist in the form of electronic data.



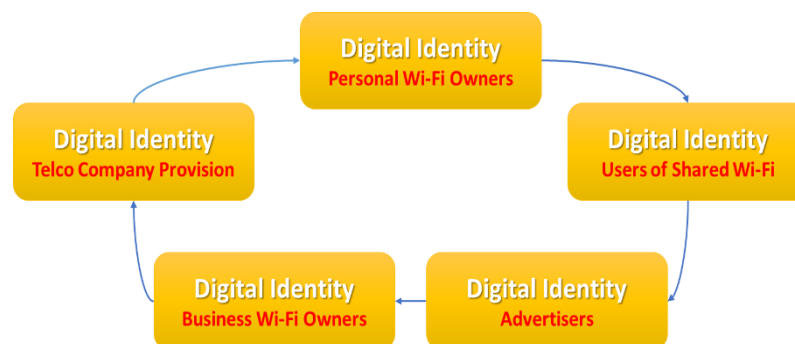
In DWS Protocol scenario, the real asset that we are referring to would be telecom company provisions such as mobile data & broadband, home/personal owners Wi-Fi router, business owners Wi-Fi routers, or personal mobile data.

In theory and in real-life, this means that any physical asset can be constituted as a digital asset on the NEO Blockchain, where ownership of that asset can be split, shared, and distributed among any number of owners or users. With Smart Contracts, this also means that trading of digital assets can be done almost instantaneously and without the need to trust any other party.

Digital Identity

By enabling Wi-Fi trading through decentralized digital assets, the next step for DWS Protocol is to enable users (traders) to open trading rules. Having trading rules means users want to know who they are trading with. This is where NEO's digital identity support comes in, the basis for DWS and NEO partnership.

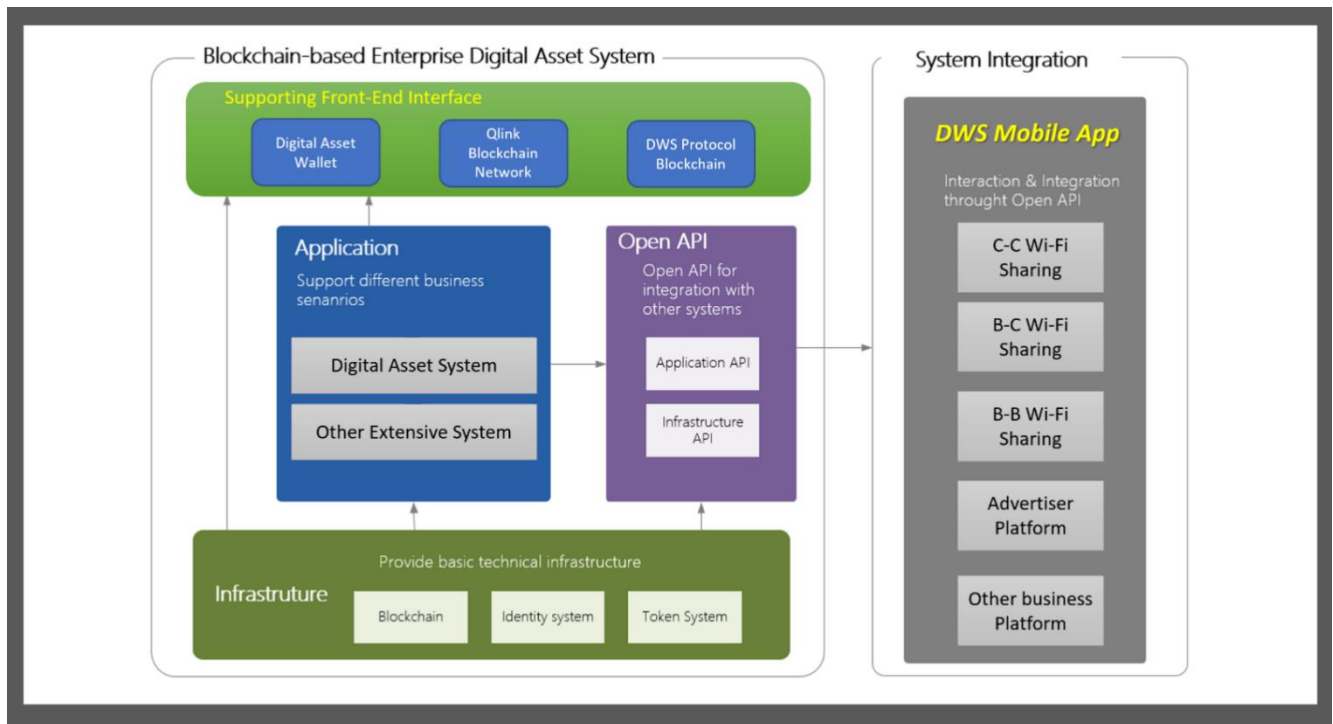
Individuals and institutions can be given their own digital identity. Participants in the market can choose to only trade with parties who have a confirmed digital identity. With digital identity, it also allows our institutions and governments to support the trading rules and ensure that the trade is fair to all parties involved. Moreover, any schemes to abuse trading deals can still be punished according to applicable law, since participants can be identified.



Together with NEO Smart Economy, DWS Protocol will allow real assets to be digitized and traded with certainty using clear and transparent trading rules in Smart Contracts and traceable and verified Digital Identities.



The full DWS & NEO Smart Economy partnership platform will look like this:





5.2 Service Level: Infrastructure of DWS PROTOCOL

The entire DWS Protocol framework will allow for the development of the DWS D-App, whose main feature is to give users Wi-Fi Access with the secondary aim of advertising content distribution for advertisers.

By giving users access to Wi-Fi, DWS will provide a Wi-Fi sharing service through its DWS mobile application. In addition, DWS will also provide content distribution for advertising purpose for advertisers.

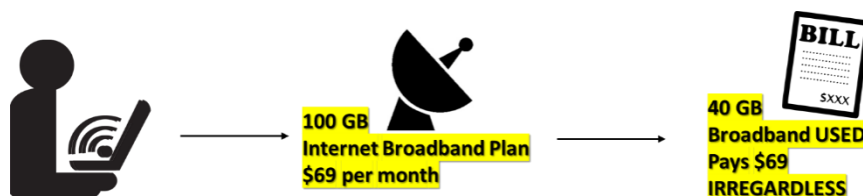
DWS Protocol will partner with third party public chain network QLC Chain to create a measurable and tradable Wi-Fi sharing ecosystem.

Measurable in this instance means that data usage from each individual user can be measured based on the amount of Wi-Fi data they use.

Tradable here means charging users based on the measured data usage.

In doing this, DWS Protocol will create a decentralized global Wi-Fi sharing network with a P2P login. Prior to the launch of the DWS Chain, the P2P login will be authenticated on the Public Chain and use a Delegated Byzantine Fault Tolerance (dBFT) consensus algorithm by NEO.

5.2.1 Implementation of decentralized Wi-Fi sharing (For sharers / Router owner)



DWS Protocol will allow the sharing of Wi-Fi from various point angles be it personal or homeowners' Wi-Fi routers, business owners' Wi-Fi routers, or personal mobile data owners. Typically, Wi-Fi (Routers) owners will purchase internet broadband plans from telecom



providers as a package with very limited or almost no option to pay-per-usage. Even if there is the option, the cost will be exorbitant. The cheaper alternative is to sign up a broadband package. In the case that Wi-Fi owners do not use up all the broadband in the month, the owner will still have to pay the same amount on the bill.

With DWS Protocol, Wi-Fi owners can share and trade their Wi-Fi with public users on a per-usage basis and fully take advantage of their broadband plan, with several trading methods to choose from.

To make this possible, DWS Protocol will enable the sharing registration of Wi-Fi hotspots through the DWS Mobile application in the form of a digital asset on the third party public chain. In doing so, Wi-Fi sharers and router owners will receive DWS tokens as payment for allowing access to the hotspot through the execution of a smart contract.

5.2.2 Enabling a Dynamic Pricing Strategy for Wi-Fi / Router owner

DWS Protocol and app will allow Wi-Fi owners to set their own dynamic pricing on their own terms. The Wi-Fi owners will be able to set their rules through the smart contract, which all Wi-Fi users can view and agree on.

With DWS dynamic pricing strategy, we can create an “on-demand” basis to cater to different categories of Wi-Fi owners with difference needs.

Category A: Personal Wi-Fi or Home Wi-Fi owners

Home Wi-Fi owners could set different pricing for Wi-Fi sharing based on different time of the day. In the day time. on a weekday, when home-owners are out for work, they can set a lower pricing structure. They can then set a higher pricing structure on evenings and weekends as they would be using Wi-Fi as well.

Category B: Business Wi-Fi owners

Small business such as a café can also set their own pricing structures based on an on-demand approach. For example, during periods of low customer traffic, café owners can



set prices lower or even provide token rewards for users to dine in and use the Wi-Fi. This can also potentially bring additional business to café owners.

Category C: Big business or Public Places

Big organizations such as offices, buildings, shopping malls or public places could also set their pricing based on an on-demand pricing structure or set their own rules based on high peak periods and off peak periods.

DWS Protocol provides an **automatic solution** through smart contract price settings based on different requirements. This ensures Wi-Fi owners have the power to set their own pricing structure.

Most importantly, DWS Protocol will also provide the option for Wi-Fi owners to determine and limit the amount of data bandwidth/speed so as to ensure optimal Wi-Fi experience and help owners not exceed their internet broadband plan limit.

5.2.3 Implementation of decentralized Wi-Fi sharing (For users)

When a DWS Wi-Fi owner shares a new Wi-Fi hotspot for the first time, it will be registered as a digital asset by DWS on the third party public chain. Some of the registration information will include the GPS address of the Wi-Fi hotspot, IP address, MAC address, internet speed test report, SSID, and other associated information. Encrypted password will be kept to the Wi-Fi with sharer/router owner and not on the public chain.

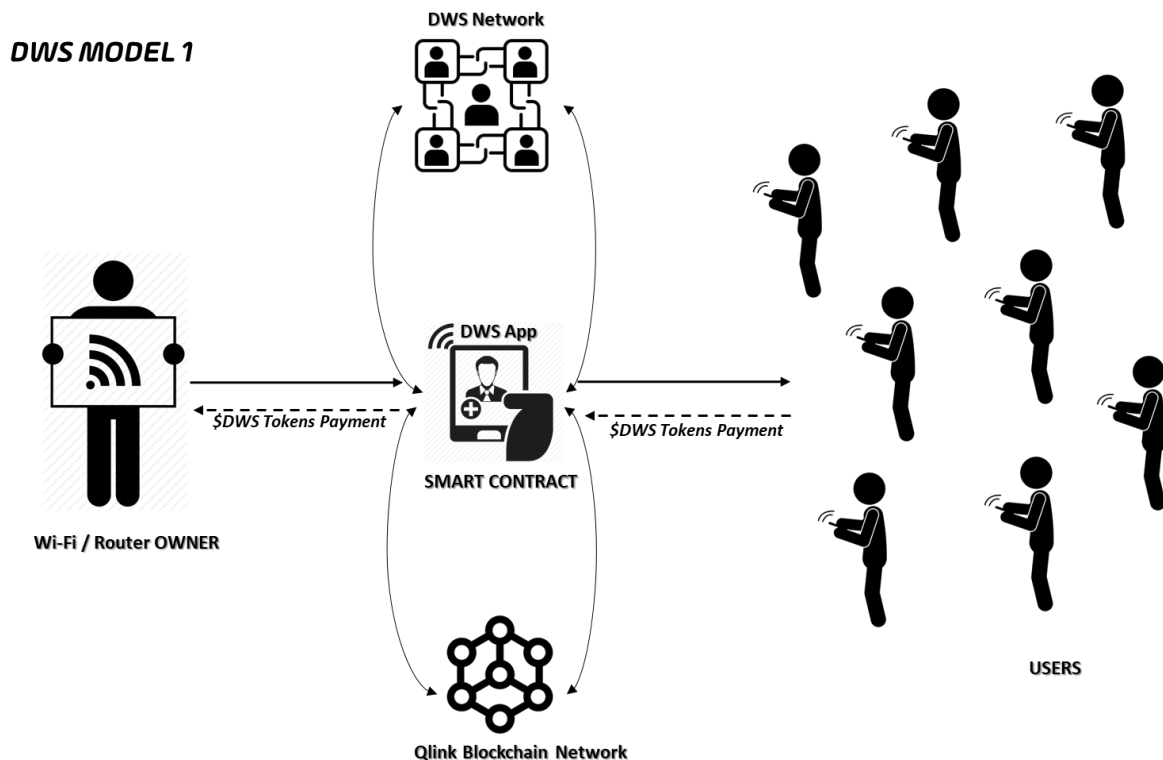
Once a new Wi-Fi hotspot has been successfully registered on the DWS Chain, Wi-Fi will become available to all DWS users.

Users can log in to the DWS mobile app to find a list of all nearby Wi-Fi hotspots. Users can then view the rules and pricing based on the Wi-Fi owner smart contract to decide if they wish to tap in and use the Wi-Fi.

DWS Protocol features will also provide a FEEDBACK mechanism for users to rate and provide feedback on the quality of the Wi-Fi. These ratings will then be pegged to the Wi-Fi owner and the consolidated ratings will be made visible to the Wi-Fi owner's profile. This will serve



as a guide to other users in choosing their Wi-Fi provider. This will also give Wi-Fi owners the opportunity to constantly improve the quality of their Wi-Fi.



Business Model: The DWS Tokens and Paying using DWS Tokens.

With DWS Protocol, we will create a shared economy that not only provides a business model to Wi-Fi owners, but also to the shared user as well.

All business models are carried out through digital asset tokens called DWS. DWS tokens will be used to pay for accessing Wi-Fi from router owners. Wi-Fi/router owners can utilize the DWS automatic solution platform to create a smart contract that charges a usage fee in DWS to users who would like access to their connection. Furthermore, DWS Protocol infrastructure will precisely measure the amount of data used, not only based on length of time used, but based on the actual data consumption of each user. Wi-Fi users will be informed clearly on the consumption amount and will pay the Wi-Fi owners in DWS tokens.

DWS Business Models:

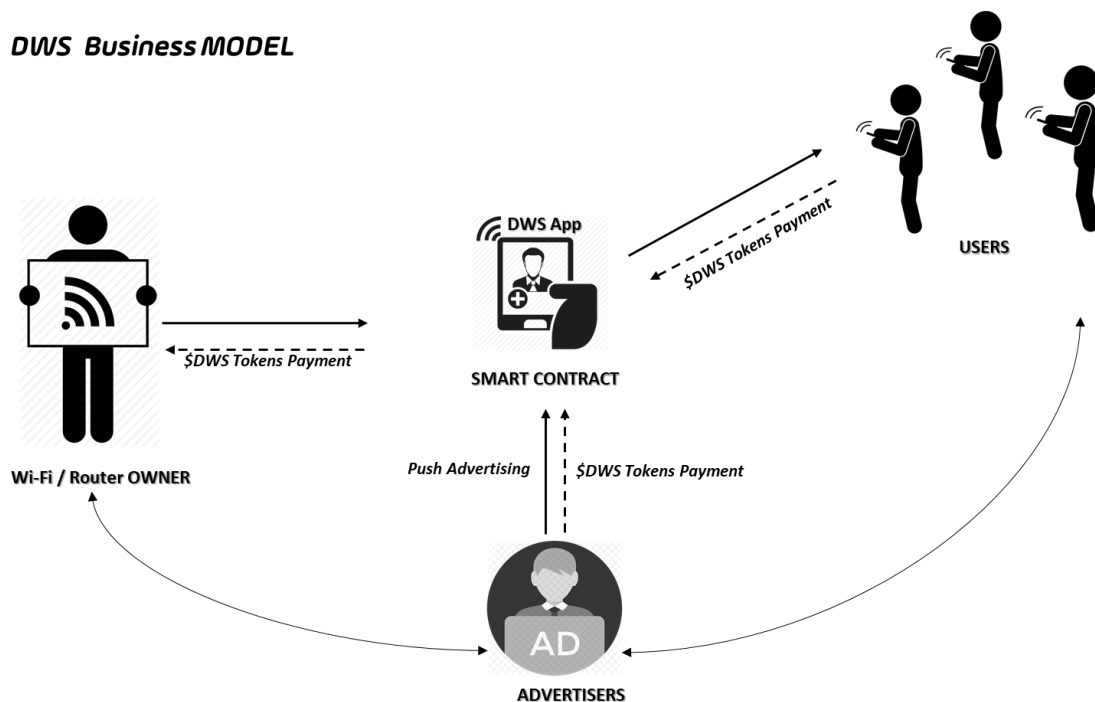


Wi-Fi Sharers and Users: Users directly pay Wi-Fi owners for sharing their Wi-Fi based on smart contract terms.

View Wi-Fi Owner's Ads for Wi-Fi Access: Wi-Fi/router owner may choose to provide free Wi-Fi in exchange for ad views. This is especially useful for owners of businesses like cafés or beauty parlors. Instead of paying exorbitant advertising fees, business Wi-Fi owners can broadcast their personal ad for users to view in exchange for free Wi-Fi access.

Advertiser Integration: Incorporate advertising and content distribution from third party advertisers as another way of monetizing Wi-Fi. This provides users with free Wi-Fi service. External parties or businesses who would like to broadcast their ads could pay the Wi-Fi owners and in return, Wi-Fi owners can provide public users with free Wi-Fi.

DWS Business MODEL





5.3 Mobile Content Sharing On the Decentralized Network System for Advertisers

Apart from sharing Wi-Fi function, DWS Protocol will be able to allow advertisers to pay for network access as a feature. In this case, we look at what challenges that traditional advertisers are facing.

Lack of information:

One main issue advertisers face is the lack of information about their target audience. Advertisers often incur unnecessary advertising costs as they are unable to specifically execute audience targeting, running bootless errand advertising campaigns to the wrong audiences. This not only increases the cost of campaigning, but also reduces advertising effectiveness, severely affecting the conversion or ROI of advertising budgets. This is usually the case when campaigning for a niche product having a clear-cut target audience.

There are however several internet tools such as search engines optimization (SEO) and social media optimization (SMO) that can support advertisers in targeting their audiences. However, their targeting parameters are very limited. Adding to this, the cost of running these tools is not insignificant. Many advertisers feel that these tools seldom bring ROI and are ineffective.

Limited access to tracking KPIs:

It is currently almost impossible to reliably track the efficiency and return on investment (ROI) of an advertising campaign. Advertisers are not able to gather or obtain the relevant key performance indicators (KPIs) such as who has viewed the ad, when it was viewed, and ad impression numbers. This greatly complicates the adjustment process if the advertising campaign does not produce the expected result. Owners of advertising media often intentionally overstate the statistical impressions data to charge more, since they know that the advertiser have no means to check the validity of the information



Content creation is a major part of on the internet; users connected to the internet tend to engage with content that they are interested in or are amused by, such as browsing Social Media feeds, getting caught in the latest Twitter tweets, communicating with friends via texts, watching movies and videos, reading e-books, and a whole host of online activities. The use of mobile data has a cost; telecom companies simply cannot provide free data. Consumers may choose to wait or look for open free Wi-Fi hotspot or opt against using the service. DWS features a solution that will allow content providers to prepay for data usage, allowing users to enjoy online content in a non-Wi-Fi environment without the need to pay for mobile data cost.

Currently, mobile network operating systems cannot accurately identify specific user content engagement activity. This means they cannot provide customized content for the user. DWS features a function that can identify and analyze advertising content to curate a customized content feed based on user interest. Telecom companies can engage in the transaction of content to improve their overall profits, content providers will be able to benefit from detailed and accurate distribution, and users will be able to have free access to sponsored content. This DWS feature will innovate changes in the traditional subscription and advertisement based business model and generate new business opportunities.

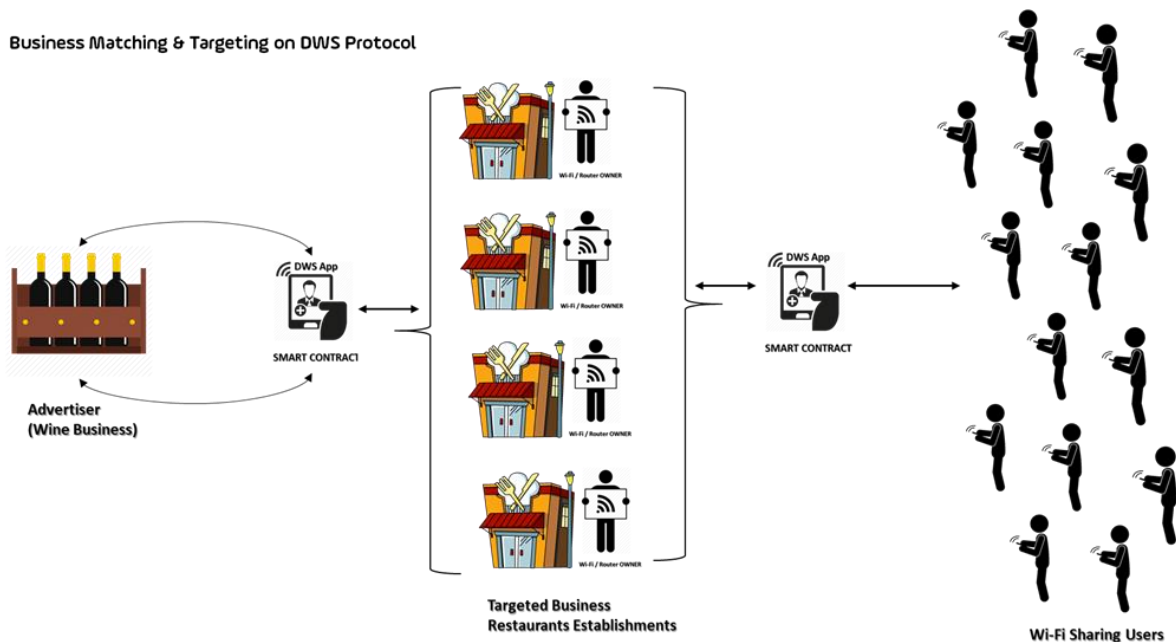
DWS features two advertising integration models:

- **The Content Provider:** Creative content owners who innovate, design, and create advertising content register their content on DWS and send out ads to everyone, paying users to view their ads and Wi-Fi owners to host their ads. They can also be Wi-Fi owners who provide Wi-Fi in exchange for users viewing their ads.
- **Business Matching.** Advertisers can choose to target specific audiences through DWS Protocol, which compiles their ads and curates advertising content for Wi-Fi users to view, maximizing advertiser marketing budgets.

DWS Protocol business matching would allow advertisers to better target the sector their product is developed for, which is more effective and cost efficient for their business. For example, a wine or liquor manufacturer company can utilize the DWS business matching service to only advertise in select industries such as restaurants, bars, and nightlife. By



targeting specific industries, audiences are more likely to be receptive to the advertisement, leading to higher conversion and ROI.



The Process for Advertisers & Volume of Ads

Operations are processed in project data centers – a distributed network available for our advertisers or businesses. The transaction will be confirmed via several NODES that allow for quick processing.

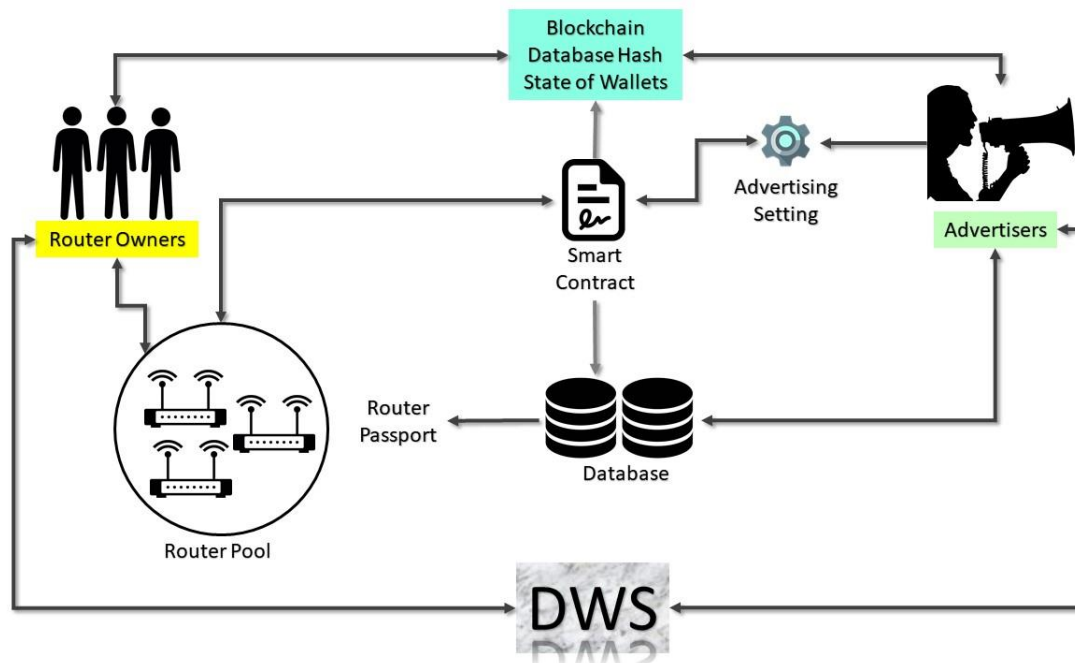
The DWS system is capable of processing high volumes of advertising transactions per second.

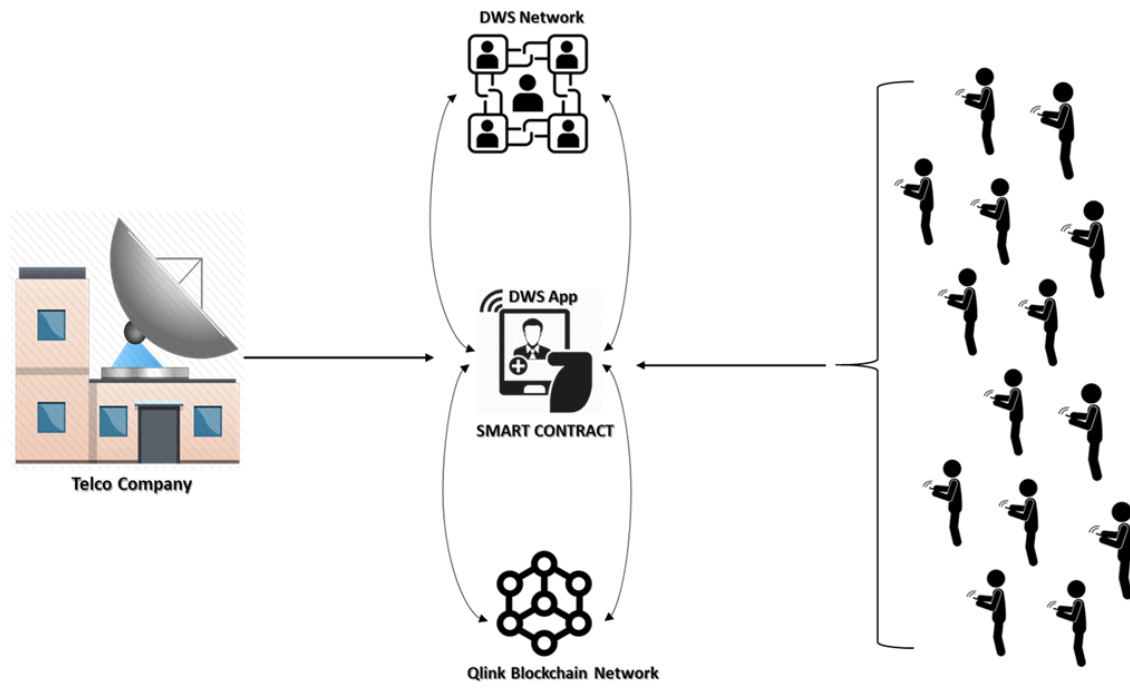
As the high-load input/output operations do not depend on the blockchain component, the system has no problems with scalability and DWS blockchain speed.

One entry in the blockchain contains information on one transaction. The number of transactions equals the number of advertising campaigns. The distributed database on the DWS Platform contains information on targeting (geo, router coordinates, number of users, age, interests, etc.) in relation to the previous advertising campaigns and their conversion, which is systematized so that these materials can be easily found and processed. The database updates automatically and is complemented by information from new advertising campaigns.



The database hash is linked to each router to ensure advertisers receive updates and reliable information on the conversion of the completed advertising campaigns. Advertisers view all this using the graphical interface where the settings and parameters of their advertising campaigns can be adjusted.







5.5 Technical Considerations & Blockchain Partnerships

DWS's decentralized WI-FI Sharing System will partner with QLC Chain as a supporting blockchain platform for network management technicalities. DWS will partner with NEO for the adoption of NEO blockchain platform in management of Digital Identity, dBFS Consensus Algorithm and Delegated Byzantine Fault Tolerance.

5.5.1 Public Chain with QLC Chain

The QLC Chain is a network transmission public chain powered by decentralized blockchain technology. The functionality of QLC Chain includes network device management on blockchain and decentralized arrangement in network and content addressing, network billing management, network firewall, and network content search.

QLC Chain connects with Linux Neutron to create a virtual network, contribute contents, establish routing capacity, ensure security, and carry out network addressing management.

The QLC Chain categorizes four types of network nodes:

- ✓ **NAT Node:** Network Address Translation Node
- ✓ **Routing Node:** Routing forwarding node based on content keyword/DHT/Router table
- ✓ **Content Node:** A node with saved content, which provides content based on retrieval requests from other nodes within the network
- ✓ **Security Node:** Performs firewall function and enacts security domain access rule

5.5.2 Asynchronous Ledger Technology

QLC Chain utilizes Asynchronous Ledger Technology specialized in network communications to create a network public chain. Asynchronous Ledger Technology is a blockchain ledger technology that provides high flow capacity in network transmission nodes. The technology will support the billing and operating functions of four network nodes.



The core of Asynchronous Ledger Technology includes the following steps:

1. Overlay a hash-addressing-based mesh network above physical network, or called the node electoral process for ledger validation
2. All nodes comply with Account Balance Mechanism, not the UTXO (Unspent Transaction Output) Mechanism. Account Balance Mechanism enables every node to have its individual account balance and a local ledger for the balance of entire network.
3. Every node signs in the local ledger with private key generated by Elliptic-curve Cryptography. The signature is irrevocable.
4. Entire network nodes are fragmented via OSPF/BGP. Each network fragmentation forms its own distributed consensus and the network consensus is confirmed twice through border gateway among various fragments.
5. The local ledger of every node is validated by Shannon Consensus, powered by QLC Chain. Generally, Step One is adequate to reach Shannon Consensus. However, the following hacking behaviors will raise Shannon Consensus validation in entire network nodes within subject fragmentation range:
 - a. Fork attack derived from Double Spending
 - b. 51% hashrate attack
 - c. Sybil attack
 - d. Broadcast storm attack

5.5.3 Shannon Consensus of QLC Chain

The Shannon Consensus of QLC Chain is designed as the following:

With the usage of the unit workload of PoS as the stake coefficient in the consensus, represented by the following formula:

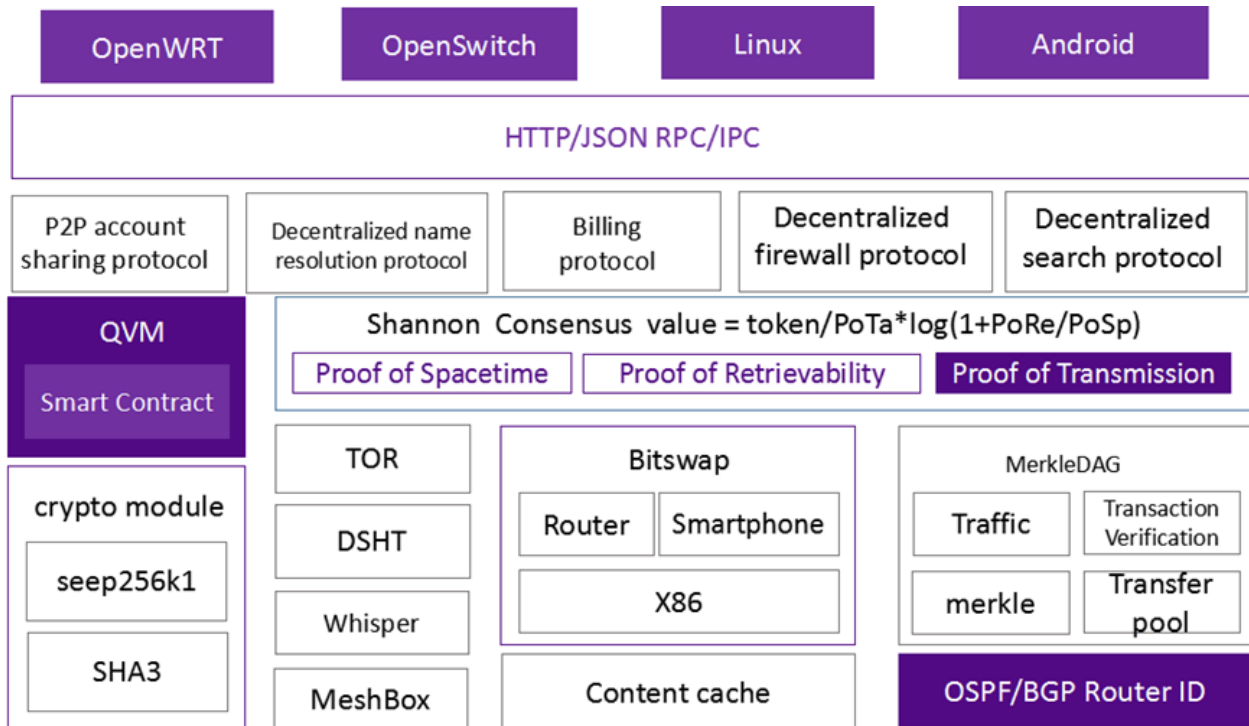
$$\text{Stake} = \text{token} / (\text{PoTa} * \log(1 + \text{PoRe} / \text{PoSp}))$$

The solution of HASH function for obtaining the right of recording the ledger should satisfy:



$$SHA3(\text{previous block hash, nonce, time stamp, Merkel tree root}) < \text{target} * \text{stake}$$

The QLC Chain Structure based on Linux Neutron is showed below:



With the enhanced design of Asynchronous Ledger of QLC Chain, the simulated transaction per second (TPS) in QLC Chain can reach 8000 – 10000, with no obvious deterioration in system efficiency. In addition, it ensures the security of the decentralized network. These advantages are better than the current PoW and PoS consensus.

5.5.4 Developing Digital Identity System with NEO

DWS will explore integration of NEO's native identity layer, NeoID for the development of DWS's digital identity system.

Digital identity refers to the identity information of individuals, organizations, and other entities that exist in digital form. The latest digital identity system is based on the PKI (Public Key Infrastructure) X.509 standard. NEO will implement a set of X.509 compatible digital



identity standards. This set of digital identity standards, in addition to compatible X.509 level certificate issuance models, will also support Web of Trust point-to-point certificate issuance model. NEO'S digital identity verification includes the use of facial features, fingerprint, voice, SMS, and other multi-factor authentication methods. At the same time, NEO will also use blockchain to replace the Online Certificate Status Protocol (OCSP) to manage and record the X.509 Certificate Revocation List (CRL).

Digital Identity is a core module in DWS's system to allow users to make online transactions secure and seamless while keeping private data secure. This enables data to be utilized in an anonymously, securely, and autonomously, as well as make data monetization user friendly for functions like targeted advertising.

5.5.5 dBFS Consensus Algorithm

The best-known consensus mechanisms are Proof of Work (e.g. Bitcoin) and Proof of Stake (e.g. Ethereum). Neo proposes an improvement by using Delegated Byzantine Fault Tolerance (dBFT) as its consensus mechanism.

The Byzantine Generals' Problem occurs anytime we try to determine the TRUE outcome of a vote. Imagine 9 Generals for the Byzantine Empire have encircled the city of Rome with their armies. In order to successfully take Rome the generals must attack or strategically retreat in unison. If any general acts opposite the consensus decision, then the armies will be routed and defeated. The decision to attack or retreat is put to a daily vote and whichever option receives >50% of the vote is what the generals agree to do. Since each General is commanding their army in separate geographic locations around the city they utilize courier's to carry their vote to the other generals.

This system has inherent flaws. First, any number of the Byzantine Generals could be bribed by the Romans to betray the Byzantine army; these would be Traitorous Generals. Second, any general could make an inappropriate decision as to whether they should attack or retreat; these are Improperly Functioning Generals. Third, the couriers carrying the votes of the generals could be bribed by the Romans to alter the votes in a traitorous way. And fourth, the couriers could fail to deliver their message or deliver the wrong message.

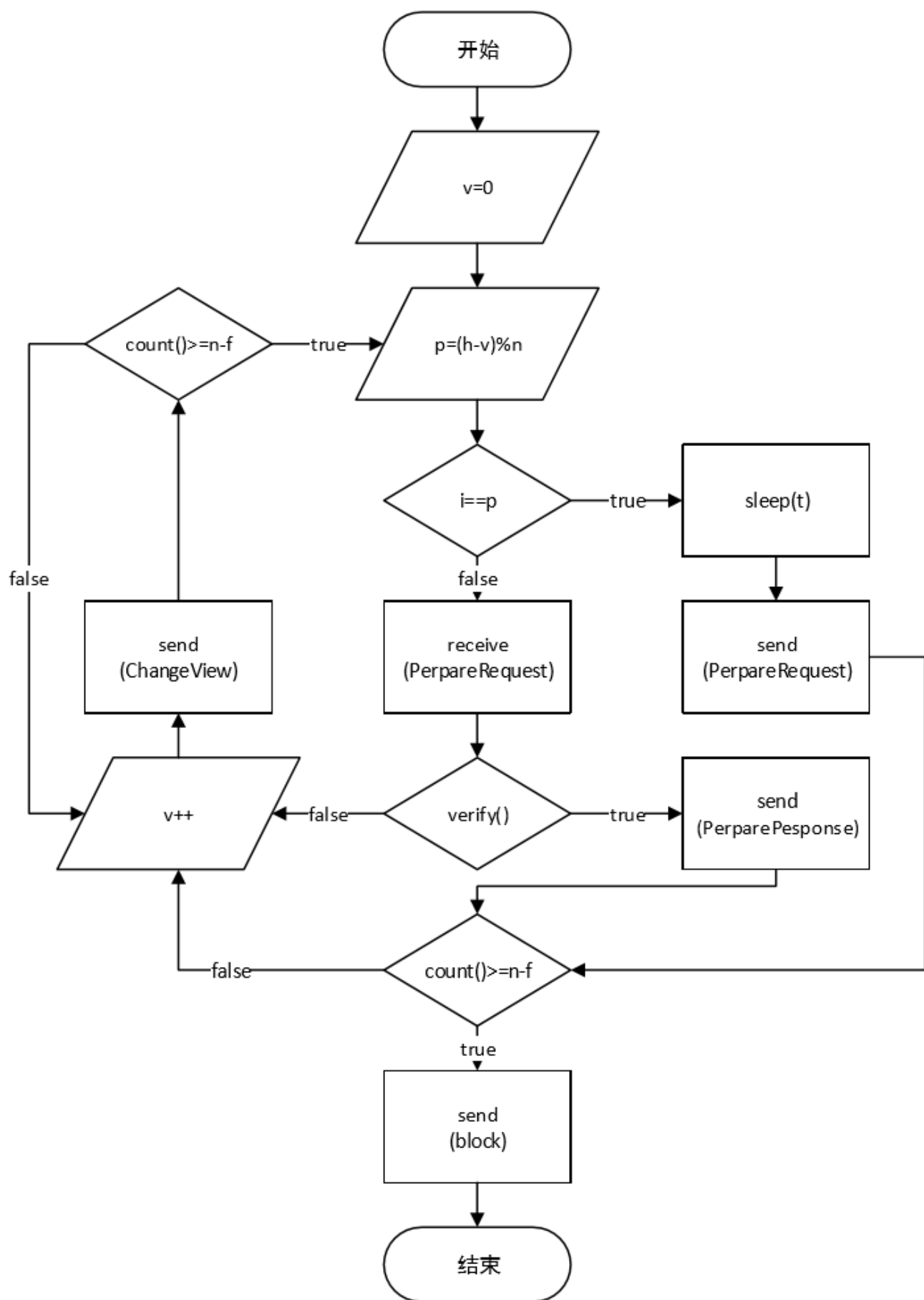


The Byzantine Generals' scenario is an analogy for the problem faced by distributed computing systems: How do we reach consensus when faced with untrustworthy and malfunctioning actors that threaten to destabilize the ecosystem?

5.5.6 Delegated Byzantine Fault Tolerance

Numerous protocols have been developed to solve the Byzantine Generals' Problem. Hyperledger, for instance, uses Practical Byzantine Fault Tolerance in its Proof of Work algorithm. Neo, on the other hand, implements Delegated Byzantine Fault Tolerance to solve the Byzantine Generals' Problem. The Neo creators chose this protocol because it allows for better scaling and performance when compared to currently existing solutions.

Scalability is a major issue for any blockchain. As the number of transactions and network size increase, the blockchain must be able to scale proportionally. If it cannot scale to keep up with demand, then transactions will be delayed or never processed at all. We saw this issue recently with the Bitcoin scaling debate the SegWit2x update that threatened to fork the blockchain.





5.6 Smart Contract Pseudocode

```
public static Object Main(string operation, params object[] args)

{

    // Contract transaction, ie assest deposit/withdrawl transaction (operation ==
signature)

    if (Runtime.Trigger == TriggerType.Verification)

    {

        TransactionOutput senderObject = GetSenderObject(GetSenderObjects());

        byte[] contributorSH = senderObject.ScriptHash;

        if (IsContributorSH(contributorSH))

        {

            // Getting Requested TX value

            BigInteger withdrawRequested = senderObject.Value / 1000000000;

            // Getting pre approved withdraw value for contributorSH

            BigInteger withdrawHold = StorageGet(contributorSH.AsString(),
"withdrawHold").AsBigInteger();

            // This should always be 0

            BigInteger balance = withdrawRequested - withdrawHold;
```



```
        if (balance == 0)

        {

            return true;

        }

    }

}

// Invocation transaction

else if (Runtime.Trigger == TriggerType.Application)

{

    Runtime.Notify("TriggerType.Application");

    // Operation Permissions:

    //   Creator:    CreateFund, DeleteFund

    //           Contributor:    DepositFunds, GetFundParameter, ReachedGoal,

ReachedEndTime, IsRefundActive, GetContributorInfo, CheckContributorOwed

}

// CREATOR //

// CREATE FUND

if (operation == "CreateFund")

{

    // Checks we have all arg inputs

    if (args.Length != 6) return false;
```




```
        return CreateFund((byte[])args[0], (string)args[1], (byte[])args[2], (byte[])args[3],  
        (BigInteger)args[4], (BigInteger)args[5]);  
    }  
  
    // CONTRIBUTOR //
```

```
    // GET FUND PARAMETER: (fid, param)
```

```
    // GET FUND PARAMETER: (fid, param)
```

```
    if (operation == "GetFundParameter") return GetFundParameter((string)args[0],  
(string)args[1]);
```

```
    // DEPOSIT FUNDS: (fid, asset, contributorSH)
```

```
    if (operation == "DepositFunds") return DepositFunds((string)args[0], (byte[])args[1],  
(byte[])args[2]);
```

```
    //if (operation == "DepositFunds") return GetFundParameter((string)args[0],  
(string)args[1]);
```

```
    // REACHED GOAL QUERY: (fid)
```

```
    if (operation == "ReachedGoal") return ReachedGoal((string)args[0]);
```

```
    // REACHED END TIME QUERY: (fid)
```

```
    if (operation == "ReachedEndTime") return ReachedEndTime((string)args[0]);
```

```
    // IS REFUND ACTIVE: (fid)
```

```
    if (operation == "IsRefundActive") return IsRefundActive((string)args[0]);
```

```
    // CONTRIBUTOR INFO: (fid, GetContributorInfo, key)
```



```
        if (operation == "GetContributorInfo") return GetContributorInfo((string)args[0],  
        (byte[])args[1], (string)args[2]);
```

```
        // GET FUNDS FROM CONTRIBUTOR: (GetContributorInfo)
```

```
        if (operation == "GetFundsFromContributorSH") return  
        GetFundsFromContributorSH((byte[])args[0]);
```

```
        // SUBMIT WITHDRAW REQUEST
```

```
        if (operation == "WithdrawFundsRequest") return  
        WithdrawFundsRequest((string)args[0], (byte[])args[1], (BigInteger)args[2]);
```

```
        // SUBMIT WITHDRAW REQUEST RESET
```

```
        if (operation == "WithdrawRequestReset") return  
        WithdrawRequestReset((byte[])args[0]);
```

```
    }
```

```
    return false;
```

```
}
```



6. PARTNERSHIPS



6.0 PARTNERSHIP



NEO IS THE USE OF BLOCKCHAIN TECHNOLOGY AND DIGITAL IDENTITY TO DIGITIZE ASSETS, THE USE OF SMART CONTRACTS FOR DIGITAL ASSETS TO BE SELF-MANAGED, TO ACHIEVE "SMART ECONOMY" WITH A DISTRIBUTED NETWORK.



QLC CHAIN DEDICATES TO BUILD THE NEXT GENERATION OF NETWORK AND EMPOWER EVERYONE TO OPERATE THEIR OWN NETWORK WHILE BENEFIT FROM IT. **THE QLC CHAIN** IS A PUBLIC CHAIN FOR MOBILE NETWORK INDUSTRY. **QLC CHAIN'S** MISSION IS TO BRING PEOPLE ONLINE THROUGH A SIMPLER, MORE PLEASANT, AND MORE SECURED WAY WITH FULL TRANSPARENCY.



SWIFT WI-FI OFFERS NEARBY WI-FI HOTSPOT OPTIONS, WHICH INCLUDE FREE WI-FI HOTSPOTS AND THE PASSWORDS SHARED BY USERS ALL AROUND THE WORLD. SWIFT WI-FI - FREE WI-FI HOTSPOT IS NOT ONLY A FREE WI-FI SHARING APP BUT ALSO A WI-FI MASTER (WI-FI OPTIMIZATION TOOL), WHICH CAN IMPROVE WI-FI PERFORMANCE, OPTIMIZE WI-FI CONNECTION BY CONNECTING TO THE OPTIMAL SIGNAL.



O n t o l o g y

ONTOLOGY IS A NEW HIGH-PERFORMANCE PUBLIC BLOCKCHAIN PROJECT & A DISTRIBUTED TRUST COLLABORATION PLATFORM. ONTOLOGY PROVIDES NEW HIGH-PERFORMANCE PUBLIC BLOCKCHAINS THAT INCLUDE A SERIES OF COMPLETE DISTRIBUTED LEDGERS AND SMART CONTRACT SYSTEMS. ONTOLOGY BLOCKCHAIN FRAMEWORK SUPPORTS PUBLIC BLOCKCHAIN SYSTEMS AND IS ABLE TO CUSTOMIZE DIFFERENT PUBLIC BLOCKCHAINS FOR DIFFERENT APPLICATIONS. ONTOLOGY SUPPORTS COLLABORATION AMONGST CHAIN NETWORKS WITH ITS VARIOUS PROTOCOL GROUPS.

END

DECENTRALIZED WIFI SHARING

DWS - TERMS AND CONDITIONS OF TOKEN SALE AND USAGE

PLEASE READ THESE TERMS OF TOKEN SALE AND USAGE CAREFULLY. IF YOU DO NOT AGREE TO THESE TERMS (AS DEFINED HEREIN), DO NOT PURCHASE (WHETHER THROUGH AN INTERMEDIARY OR OTHERWISE) OR CONTINUE TO HOLD OR USE DWS (AS DEFINED BELOW). THESE TERMS DO NOT CONSTITUTE A PROSPECTUS OR OFFERING DOCUMENT, AND ARE NOT AN OFFER TO SELL, NOR THE SOLICITATION OF AN OFFER TO BUY ANY INVESTMENT OR FINANCIAL INSTRUMENT IN ANY JURISDICTION.

BY MAKING A CONTRIBUTION TO THE SELLER (AS DEFINED BELOW) OR ANY INTERMEDIARY FOR THE PURCHASE OF DWS, OR BY CONTINUING TO HOLD OR USE DWS WHICH YOU MAY HAVE OBTAINED BY ANY OTHER MEANS, YOU WILL BE BOUND BY THESE TERMS AND ALL TERMS INCORPORATED HEREIN BY REFERENCE. BY ACCEPTING THESE TERMS, YOU WILL BE ENTERING INTO A BINDING AGREEMENT WITH THE SELLER, WHICH TERMS CONTAIN PROVISIONS WHICH AFFECT YOUR LEGAL RIGHTS. THE PURCHASE, HOLDING AND USAGE OF DIGITAL TOKENS IS SUBJECT TO A NUMBER OF RISKS (INCLUDING FINANCIAL RISK), SOME OF WHICH WE HAVE SET OUT IN THESE TERMS. IF YOU ARE IN ANY DOUBT AS TO THE SUITABILITY OR OTHERWISE OF PURCHASING, HOLDING OR USAGE OF THE DIGITAL TOKENS REFERRED TO IN THESE TERMS, YOU SHOULD SEEK APPROPRIATE PROFESSIONAL ADVICE.

NOTHING IN THESE TERMS CONSTITUTES LEGAL, FINANCIAL, BUSINESS OR TAX ADVICE AND YOU SHOULD CONSULT YOUR OWN LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISER BEFORE ENGAGING IN ANY ACTIVITY IN CONNECTION HEREWITH.

Your purchase, whether through an intermediary or otherwise, of DWS (**DWS**) from DWS Foundation Limited, a company incorporated in Singapore (the Seller, we, or us), as well as continued holding and/or usage of DWS is subject to these Terms and Conditions (the **Terms**). Each of you and the Seller is a "Party," and together the "Parties." Please read the below terms and conditions carefully before registering, accessing, browsing, downloading. By accessing or using the Website, purchasing DWS (whether through an intermediary or otherwise), or continuing to hold or use DWS, you agree to be bound by these Terms (and all terms incorporated by reference).

Before agreeing to the Terms, you must read this document in full. If at any time you do not agree to these terms and conditions or do not wish to be bound by these terms and conditions, you may not access or use the Website, and shall not be entitled to purchase DWS (whether through an intermediary or otherwise) or continue to hold or use DWS. We shall be under no obligation to maintain a copy of these Terms on the Website after the sale of DWS, and you are advised to print or download and keep a copy of these Terms for your future reference (if required).

1. PURPOSE AND USAGE OF TOKENS

DWS is a cryptographic utility token. The purpose of DWS is to facilitate the participation in the DWS network platform (the **DWS Platform**) which, when fully developed, is envisaged to be an infrastructure level platform with a variety of blockchains and databases, multi-source identities and multi-source data exchange protocols. Eventually, the goal is for the DWS Platform to include tools for the blockchain community and developers to design and build applications in the ecosystem on the DWS Platform. The DWS Platform is not, and will in no case be, an enterprise, corporation, partnership or other entity or body corporate established under the laws of any jurisdiction, but a computerized consensus protocol based on which a public transaction ledger is generated.

DWS is designed to be the only mechanism by which a user may obtain access to certain products and services on the DWS Platform (when the same is completed and deployed), and further, DWS is to be paid to users as incentives for maintenance of the DWS Platform. For each exchange of services or products on the DWS Platform, the costs are to be quantified in DWS and paid to the DWS Platform and/or the other party providing the service. When the native blockchain is online, DWS is designed to be used as virtual crypto “fuel” for using certain designed functions on the DWS Platform (such as executing transactions and running the distributed applications on the DWS Platform), providing the economic incentives which will be consumed to encourage participants to contribute and maintain the ecosystem on the DWS Platform. Computational resources are required for running various applications and executing transactions on the DWS Platform, as well as the validation and verification of additional blocks / information on the blockchain, thus providers of these services / resources would require payment for the consumption of these resources (i.e. "mining"), and DWS will be used as the unit of exchange to quantify and pay the costs of the consumed computational resources. DWS is an integral and indispensable part of the DWS Platform, because in the absence of DWS, there would be no incentive to provide these computational resources or common unit of exchange to pay for these costs, thus rendering the ecosystem on the DWS Platform unsustainable.

The ownership of DWS carries no rights, express or implied, in the Seller, its related entities or its affiliates (each, a **Group Entity**) other than the right to use DWS as a means to enable usage of and interaction with the DWS Platform, upon the successful development and deployment of the DWS Platform. DWS is sold as a consumable virtual good, and does not have any functionality or utility outside the ecosystem on the DWS Platform – accordingly it is not necessarily merchantable and does not necessarily have any other use or value. The ecosystem on the DWS Platform is structured as a "closed system" insofar as the usage of DWS is concerned.

You understand and accept that DWS:

- a. may only be utilised on the DWS Platform, is non-refundable and cannot be exchanged for cash (or its equivalent value in any other virtual currency) or any payment obligation by any Group Entity;
- b. does not represent or confer on you any ownership right, shareholding, participation, right, title, or interest of any form with respect to any Group Entity or any other company, enterprise or undertaking, or any of their revenues or assets, including without limitation any right to receive future revenue, shares, ownership right or stake, share or security, any voting, distribution, redemption, liquidation, proprietary (including all forms of intellectual property), or other financial or legal rights or equivalent rights, or intellectual property rights or any other form of participation in or relating to the DWS Platform, any Group Entity and/or any service provider of any Group Entity;
- c. is not intended to be a representation of currency or money (whether fiat or virtual or any form of electronic money), security, commodity, bond, debt instrument or any other kind of financial instrument or investment;

- d. is not a loan to any Group Entity and is not intended to represent a debt owed by any Group Entity, and there shall be no expectation of profit or interest income arising in connection therewith;
- e. does not provide you with any ownership or other interest in any Group Entity;
- f. is not any form of financial derivative;
- g. is not any form of commercial paper or negotiable instrument;
- h. will not entitle token holders to any promise of fees, revenue, profits or investment returns, nor should there be any such expectation;
- i. is not any note, debenture, warrant or other certificate that entitles the holder to any interest, dividend or any kind of return from any Group Entity or any person;
- j. is not any commodity or asset that any person is obliged to redeem or purchase;
- k. is not for speculative investment;
- l. is not intended to constitute securities in Singapore or any relevant jurisdiction;
- m. does not result in any mutual covenants, or agreement to rights and obligations, being entered into between you and other holders of DWS *inter se*; and
- n. is subject to limitations and conditions in these Terms and all applicable policies as may be published from time to time on the DWS Platform.

You acknowledge and agree that no Group entity is under any obligation to issue replacement DWS in the event any DWS or private key is lost, stolen, malfunctioning, destroyed or otherwise inaccessible or unusable for any reason.

IN PARTICULAR, PLEASE NOTE THAT WE ARE IN THE PROCESS OF UNDERTAKING LEGAL AND REGULATORY ANALYSIS OF THE FUNCTIONALITY OF DWS. FOLLOWING THE CONCLUSION OF THIS ANALYSIS, THERE MAY BE CHANGES TO THE INTENDED FUNCTIONALITY OF DWS IN ORDER TO ENSURE COMPLIANCE WITH ANY LEGAL OR REGULATORY REQUIREMENTS TO WHICH WE ARE OR DWS IS SUBJECT. IN THE EVENT OF ANY CHANGES TO THE INTENDED FUNCTIONALITY OF DWS, THE DETAILS OF THE CHANGES SHALL BE PUBLISHED ON THE WEBSITE. IT IS YOUR RESPONSIBILITY TO REGULARLY CHECK THE WEBSITE FOR ANY SUCH NOTICES.

2. SCOPE OF TERMS

Unless otherwise stated herein, your purchase of DWS (whether through an intermediary or otherwise), and continued holding and/or usage of DWS is governed solely by these Terms. New terms or policies may be published from time to time on the DWS Platform at our sole discretion.

The sale of DWS does not constitute the provision of any goods and/or services as at the date that these Terms form a binding agreement between the Parties. Any potential future usage of DWS in connection with providing or receiving services or the usage of the DWS Platform (when the same is completed and deployed) will be governed primarily by other applicable terms and policies (collectively, the **Service Terms and Policies**), which will be made available on the DWS Platform and/or Website, if the services and DWS Platform is successfully completed and deployed. We may update these Terms or the Service Terms and Policies in our sole and absolute discretion. It shall be your responsibility to regularly check the DWS Platform / Website for any such notices.

To the extent of any conflict with these Terms, the updated Terms and the Service Terms and Policies which may be published from time to time on the DWS Platform shall prevail with respect to any issues relating to the usage of DWS in connection with the DWS Platform.

We reserve the right to require you to provide us with your personal details (including without limitation correct name, address and details of the digital wallet from which you have sent the funds), and it is your responsibility to provide correct details. Failure to provide this information will prevent us from transferring DWS to your digital wallet.

3. CANCELLATION AND REFUSAL AT SELLER'S DISCRETION

You shall be deemed to have made an offer to purchase DWS from us on these Terms upon our safe receipt (i.e. confirmed by the relevant blockchain / network and freely made available for transfer by us) of the relevant virtual currency transferred to the correct digital wallet address (as notified to you or otherwise published by us), and we reserve the right to refuse, cancel or accept any offers to purchase DWS (without giving reasons) at any time in our sole discretion (including without limitation in connection with any failure to complete know-your-customer, anti-money laundering and counter terrorist financing checks prescribed by us).

Your purchase of DWS (whether through an intermediary or otherwise) from the Seller is final, and you waive any rights to be refunded any amounts which you have paid to us in exchange for DWS or to cancel any purchase (whether through an intermediary or otherwise) of DWS, Provided Always that in the event of an adverse change of the regulatory environment, we shall (at our sole discretion) be entitled to cancel all issued DWS and repay the price (in the same currency or virtual currency, as the case may be) that you pay for DWS (less fees and expenses incurred in connection with the development of the DWS Platform).

4. ACKNOWLEDGMENT AND ASSUMPTION OF RISKS

You acknowledge and agree that there are numerous risks associated with purchasing DWS, holding DWS, and using DWS for participation in the DWS Platform. If you have any queries or require any clarification regarding these risks, please contact us at dwsofficial@dswifi.com.

YOU CLEARLY UNDERSTAND THAT BLOCKCHAIN AND VIRTUAL CURRENCIES / TOKENS, INCLUDING WITHOUT LIMITATION ETHEREUM, BITCOIN, NEO and QTUM, ARE NEW AND UNVERIFIED

TECHNOLOGIES THAT ARE BEYOND CONTROL OF ANY GROUP ENTITY. IN PARTICULAR, AND IN ADDITION TO TERMS OF THIS DOCUMENT, YOU BEAR FULL RESPONSIBILITY FOR ANY RISKS DESIGNATED IN THE PROPOSED DOCUMENTATION. BY PURCHASING (WHETHER THROUGH AN INTERMEDIARY OR OTHERWISE), HOLDING AND/OR USING DWS, YOU EXPRESSLY ACKNOWLEDGE AND ASSUME THE FOLLOWING RISKS:

a. Security

You are responsible for implementing reasonable measures for securing the digital wallet, vault or other storage mechanism you use to receive and hold DWS which you have purchased, including any requisite passwords, tokens, private key(s) or other credentials necessary to access such storage mechanism(s). If your passwords, tokens, private key(s) or other access credentials are lost, you may lose access to your DWS. We cannot be responsible for, and are technologically unable to recover, any such losses.

b. Risks associated with the Blockchain Protocol

Given that DWS and the DWS Platform are based on blockchain protocol and architecture, any malfunction, breakdown or abandonment of the relevant blockchain protocol or architecture may have a material adverse effect on DWS and/or the DWS Platform. Moreover, advances in cryptography, or technical advances (including without limitation development of quantum computing), could present unknown risks to DWS and/or the DWS Platform by rendering ineffective the cryptographic consensus mechanism that underpins that blockchain protocol.

c. Insufficient Information

The DWS Platform is at the stage of development as of the date of these Terms and its algorithm, code, consensus mechanism and/or various other technical specifications and parameters could be updated and changed frequently and constantly. While the marketing materials and Whitepaper released relating to the development of the DWS Platform has been prepared with the then up-to-date key information of the DWS Platform, it is not absolutely complete and is subject to adjustments and updates from time to time for optimal development and growth of the DWS Platform and/or ecosystem on the DWS Platform. We are unable, nor obliged, to keep you closely posted on every detail of the development of the DWS Platform (including its progress and expected milestones no matter whether rescheduled or not) and therefore will not necessarily provide you with timely and full access to all the information relating to the DWS Platform that may emerge from time to time. Due to the nature of the project to develop the DWS Platform, you accept that such insufficiency of information disclosure is inevitable and reasonable.

d. Security weaknesses.

Hackers or other malicious groups or organisations may attempt to interfere with DWS and/or the DWS Platform in a variety of ways, including, but not limited to, malware attacks, denial of service attacks, consensus-based attacks, Sybil attacks, smurfing and spoofing. Furthermore, there is a risk that a third party or a member of any Group Entity may intentionally or unintentionally introduce weaknesses into the core infrastructure of DWS and/or the DWS Platform, which could negatively affect DWS and/or the DWS Platform.

e. Risks associated with markets for DWS

There is no prior market for DWS and the DWS token sale may not result in an active or liquid market for DWS. DWS is intended to be used solely within the network for the DWS Platform, hence there may be illiquidity risk with respect to any DWS you hold.

DWS is not a currency issued by any central bank or national, supra-national or quasi-national organisation, nor is it backed by any hard assets or other credit nor is it a "commodity" in the usual and traditional sense of that word. We are not responsible for, nor do we pursue, the circulation and trading of DWS on any market. Trading of DWS will merely depend on the consensus on its value between the relevant market participants. No one is obliged to purchase any DWS from any holder of DWS, including the purchasers, nor does anyone guarantee the liquidity or market price of DWS to any extent at any time. Furthermore, DWS may not be resold to a purchaser who is a citizen, national, resident (tax or otherwise), domiciliary or green card holder of a Restricted Country or to purchasers where the purchase of DWS may be in violation of applicable laws. Accordingly, we cannot ensure that there will be any demand or market for DWS, or that the price you pay for DWS is indicative of any market valuation or market price for DWS.

Any secondary market or exchange for trading DWS would be run and operated wholly independently of the Group Entities, the sale of DWS and the DWS Platform. No Group Entity will create such secondary markets nor will it act as an exchange for DWS. Even if secondary trading of DWS is facilitated by third party exchanges, such exchanges may be relatively new and subject to little or no regulatory oversight, making them more susceptible to fraud or manipulation. Furthermore, to the extent that third parties do ascribe an external exchange value to DWS (e.g., as denominated in a virtual or fiat currency), such value may be extremely volatile, decline below the price which you have paid for DWS, and/or diminish to zero.

f. Risk of Uninsured Losses

DWS is uninsured unless you specifically obtain private insurance to insure them. In the event of loss or loss of utility value, there is no public insurer or private insurance arranged by us, to offer recourse to you.

g. Uncertain Regulations and Enforcement Actions

The regulatory status of DWS and distributed ledger technology is unclear or unsettled in many jurisdictions, but numerous regulatory authorities across jurisdictions have been outspoken about considering the implementation of regulatory regimes which govern cryptocurrency or cryptocurrency markets. It is impossible to predict how, when or whether regulatory agencies may apply existing regulations or create new regulations with respect to such technology and its applications, including DWS and/or the DWS Platform. Regulatory actions could negatively impact DWS and/or the DWS Platform in various ways. The Seller or any Group Entity may cease operations in a jurisdiction in the event that regulatory actions, or changes to law or regulation, make it illegal to operate in such jurisdiction, or commercially undesirable to obtain the necessary regulatory approval(s) to operate in such jurisdiction.

h. Taxation risks

The tax characterisation of DWS is uncertain. You must seek your own tax advice in connection with the purchase, holding and/or usage of DWS, which may result in adverse tax consequences to you, including withholding taxes, income taxes and tax reporting requirements.

i. Competitors

It is possible that alternative networks could be established that utilise the same or similar code and protocol underlying DWS and/or the DWS Platform and attempt to re-create similar facilities. The DWS Platform may be required to compete with these alternative networks, which could negatively impact DWS and/or the DWS Platform.

j. Insufficient Interest

It is possible that the DWS Platform will not be used by a large number of individuals, companies and other entities or that there will be limited public interest in the creation and development of distributed ecosystems (such as the DWS Platform). Such a lack of use or interest could negatively impact the development of the DWS Platform and therefore the potential utility of DWS.

k. Risk of Dissolution of the Seller, any Group Entity or the DWS Platform

Start-up companies such as the Seller involve a high degree of risk. Financial and operating risks confronting start-up companies are significant, and the Seller is not immune to these. Start-up companies often experience unexpected problems in the areas of product development, marketing, financing, and general management, among others, which frequently cannot be solved.

It is possible that, due to any number of reasons, including, but not limited to, an unfavourable fluctuation in the value of cryptographic and fiat currencies, decrease in the utility of DWS due to negative adoption of the DWS Platform, the failure of commercial relationships, or intellectual property ownership challenges, the DWS Platform may no longer be viable to operate and the Seller or any Group Entity may be dissolved.

l. Risks Arising from Lack of Governance Rights

Because DWS confers no governance rights of any kind with respect to the DWS Platform or any Group Entity, all decisions involving the DWS Platform or any Group Entity will be made by the relevant Group Entity at its sole and absolute discretion, including, but not limited to, decisions to discontinue the services and/or ecosystem on the DWS Platform, to create and sell more DWS for use in the ecosystem on the DWS Platform, or to sell or liquidate any Group Entity. These decisions could adversely affect the DWS Platform and DWS you hold.

m. Loss of Talent

The development of the DWS Platform depends on the continued co-operation of the existing technical team and expert consultants, who are highly knowledgeable and experienced in their respective sectors. The loss of any member may adversely affect the DWS Platform or its future development.

n. Failure to develop

There is the risk that the development of the DWS Platform will not be executed or implemented as planned, for a variety of reasons, including without limitation the event of a decline in the prices of any digital asset, virtual currency or DWS, unforeseen technical difficulties, and shortage of development funds for activities.

o. Risks Involving Cloud Storage

As the DWS Platform may provide a decentralised cloud storage service to individual and institutional clients, including users and applications, the DWS Platform (and services thereon) are susceptible to a number of risks related to the storage of data in the cloud. The DWS Platform (and services thereon) may involve the storage of large amounts of sensitive and/or proprietary information, which may be compromised in the event of a cyberattack or other malicious activity. Similarly, the DWS Platform and/or services thereon may be interrupted and files may become temporarily unavailable in the event of such an attack or malicious activity. Because users can use a variety of hardware and software that may interface with the DWS Platform, there is the risk that the DWS Platform and/or services thereon may become unavailable or interrupted based on a failure of interoperability or an inability to integrate these third-party systems and devices that the Group Entities do not control. The risk that the DWS Platform and/or services thereon may face increasing interruptions and the ecosystem on the DWS Platform may face additional security vulnerabilities could adversely affect the DWS Platform and ecosystem thereon, and therefore the future utility of any DWS that you hold.

p. Forking

The DWS Platform is an open source project with community support. The Seller (nor any Group Entity) does not and cannot monopolise the development, marketing, operation or otherwise of the DWS Platform. Any entity may independently develop a patch or upgrade of the source code of the DWS Platform or blockchain without prior authorisation of any other party. The acceptance of these patches or upgrades by a sufficient (not necessarily overwhelming) percentage of DWS holders could result in a “fork” in the blockchain, and consequently two diverging networks will emerge and remain. Each branch of the blockchain arising from the fork will have its own native cryptographic tokens – accordingly there will be two different versions of DWS respectively residing in the two divergent branches with almost identical technical features and functions. The community on the DWS Platform may split into two groups in support of the two branches respectively.

Further, it is theoretically possible for each branch of the forked blockchain to be further forked an unlimited number of times. The temporary or permanent existence of forked Blockchains could adversely affect the operation of the DWS Platform and blockchain and the DWS which you hold, and may ruin the sustainability of the DWS Platform.

q. Other risks

In addition to the aforementioned risks, there are other risks associated with your purchase, holding and usage of DWS, including those that the Seller cannot anticipate. Such risks may further materialise as unanticipated variations or combinations of the aforementioned risks.

5. KNOW YOUR CLIENT REGULATIONS AND PERSONAL DATA

Know your client regulations

You hereby acknowledge and accept that:

- a. The Seller may be required to conduct customer identification, due diligence and anti-money laundering due diligence on all purchasers of DWS in compliance with all applicable laws and legislations. We may determine, in our sole discretion, that it is necessary to obtain certain information about you in order to comply with these laws and legislations. You agree to provide us such information promptly upon request, and you acknowledge that we may refuse to sell DWS to you until you provide such requested information and we have determined that it is permissible to sell you DWS under applicable law or regulation.
- b. We may at any point in time request information and/or documentation to establish that our identification records, as well as the information that form your profile, remain completely updated. In this respect, we reserve the right to examine and check on a regular basis the validity and adequacy of your identification data and information we maintain.
- c. If at any time we become aware that reliable or adequate data and information are missing from your identity, we reserve the right to take all necessary actions to collect the missing data and information (whether from you or from third parties) so as to update and complete your profile as necessary.
- d. If you fail or refuse to submit, within a reasonable timeframe, the required data and identification information for the updating of your identity and, as a consequence, we are unable to comply with any laws, legislations regulations or directives relating to customer identification requirements, the Seller will not be able to sell DWS and/or continue its relationship with you, and we may be required to submit a report of suspicious transactions/activities to the relevant authorities.

Personal Data

- i. We (and our affiliates) will collect, use, process and disclose your information and personal data (as defined in the Personal Data Protection Act 2012 of Singapore) for providing our services and discharging of our legal duties and responsibilities, administration, customer services, crime (including tax evasion) prevention and detection, anti-money laundering, due diligence and verification of identity purposes (collectively, the **Purposes**). We may disclose your information to our service providers, agents, relevant custodians or similar third parties for these Purposes. We may keep your information for such period as may be determined by us (which

shall be no shorter than any mandatory period prescribed by law) to contact you about the DWS Platform. You hereby consent to us transferring your personal data to our affiliates or service providers for processing and to recipients in countries which do not provide the same level of data protection as Singapore if necessary for the Purposes.

- ii. If you withdraw your consent to any or all use of your personal data, depending on the nature of your request, this may limit the scope of our services which we are able to provide to you. Please contact us at dwsofficial@dswifi.com (marking your email for the attention of “Data Protection Officer”). We will endeavour to respond to your query / request within 30 days, and if that is not possible, we will inform you of the time by which we will respond to you.
- iii. You hereby warrant, represent and confirm to us and shall procure that with respect to any personal data of any individual (including, where applicable, your directors, partners, office holders, officers, employees, agents, shareholders and beneficial owners) (each, an **Individual**) disclosed to us in connection with these Terms, the Service Terms and Policies and/or the DWS token sale or otherwise collected by us in the course of your relationship with us or any of our affiliates:
 - 1. each Individual to whom the personal data relates has, prior to such disclosure or collection, agreed and consented to, and permitted you on its behalf to consent to, such disclosure as well as the collection, processing, use and disclosure of the Individual’s personal data by us for all purposes required by us in connection with these Terms and/or the DWS token sale;
 - 2. that each Individual has read and consented to the collection, processing, use and disclosure of the Individual’s personal data by us in accordance with the Purpose; and
 - 3. any consent given pursuant to these Terms in relation to each Individual’s personal data shall survive death, incapacity, bankruptcy or insolvency of that Individual and the termination or expiration of these Terms and the Service Terms and Policies.
- iv. If any Individual should withdraw his/her consent to any or all use of his/her personal data, then depending on the nature of the withdrawal request, we may not be in a position to continue its relationship with you and/or sell DWS, and we shall be entitled to its rights under these Terms and the Service Terms and Policies (without prejudice to our other rights and remedies at law against you).

6. TAXES

The price that you pay for DWS is **exclusive** of all applicable taxes (including without limitation obligations to pay value added, sales, use, offerings, withholding taxes, income or similar taxes) (**Taxes**). The onus for determining the Taxes applicable to your purchase, holding and/or usage of DWS lies solely with you. It is also your sole responsibility to comply with all relevant tax reporting requirements arising out of or in connection with your purchase, holding and/or usage of DWS. We are not responsible for withholding, collecting, reporting, or remitting any Taxes arising from your purchase, holding and/or usage of DWS. We cannot and do not provide any tax advice and we recommend that you seek appropriate professional advice in this area if required.

7. REPRESENTATIONS AND WARRANTIES

By purchasing (whether through an intermediary or otherwise), holding and/or using DWS, you represent and warrant that:

- a. You have read and understand these Terms, and you have all requisite power and authority to execute and deliver these Terms, to participate in the DWS token sale, to purchase, hold and/or use DWS, and to carry out and perform your obligations under these terms.
- b. If you are an individual, you are at least 18 years old and of sufficient legal age and capacity to purchase, hold and/or use DWS. If you are a legal person, you are duly organised, validly existing and in good standing under the laws of your domicile and each jurisdiction where you conduct business or where your assets are located. You are not purchasing, holding and/or using DWS on behalf of any other entity or person.
- c. The execution, delivery and performance of these Terms will not result in any violation of, be in conflict with, or constitute a default under, with or without the passage of time or the giving of notice: (i) any provision of your constitutional documents (if applicable), (ii) any provision of any judgment, decree or order, or any agreement, obligation, duty or commitment to which you are a party, or by which you are bound, or to which any of its material assets are subject, (iii) any laws, regulations or rules applicable to you, (iv) any foreign exchange or regulatory restrictions applicable to such purchase, holding and/or usage of DWS, or (v) any governmental or other consents that may need to be obtained.
- d. The execution and delivery of, and performance under, these Terms require no approval or other action from any governmental authority or person. You will and shall at your own expense ensure compliance with all laws, regulatory requirements and restrictions applicable to you (as the case may be).
- e. You have a good and sufficient understanding in business and financial matters, including a good and sufficient understanding of the functionality, usage, storage, transmission mechanisms and other material characteristics of blockchain technology and blockchain-based software systems, cryptographic tokens, and token storage mechanisms (such as digital token wallets) to understand these Terms and to appreciate the risks and implications of purchasing, holding and/or usage of DWS.
- f. You have obtained sufficient information about DWS to make an informed decision to purchase, hold and/or use DWS.
- g. The funds, including any fiat, digital currency, virtual currency or cryptocurrency, used to purchase DWS are obtained through “mining” activities or other lawful means, and are not derived from or related to any unlawful activities, including but not limited to money laundering or terrorist financing, and you shall not use DWS to finance, engage in, or otherwise support any unlawful activities. To the extent required by applicable laws and regulations, you shall fully comply with all anti-money laundering and counter-terrorism financing requirements in the jurisdiction.

- h. Neither you (or any of your subsidiaries, any director or officer, or any employee, agent, or affiliate as the case may be) nor any person having a direct or indirect beneficial interest in you or DWS being purchased, held or used by you, or any person for whom you are acting as agent or nominee in connection with DWS, is the subject of any sanctions administered or enforced by the US Department of the Treasury's Office of Foreign Assets Control, the US Department of State, the United Nations Security Council, the European Union, Her Majesty's Treasury, the Hong Kong Monetary Authority or the Monetary Authority of Singapore (collectively, **Sanctions**) or is located, organised, citizen or resident in a country or territory that is, or whose government is, the subject of Sanctions.
- i. You are not (i) a citizen, national, resident (tax or otherwise), domiciliary or green card holder of a geographic area or country in which (A) access to or participation in the DWS token sale or the DWS Platform is prohibited by applicable law, decree, regulation, treaty, or administrative act or (B) where it is likely that the sale of DWS would be construed as the sale of a security (howsoever named) or investment product (including without limitation the United States of America, Canada, New Zealand, People's Republic of China and the Republic of Korea) (the **Restricted Countries**), or (ii) a citizen or resident of, or located in, a geographic area that is subject to Sanctions or (iii) an individual, or an individual employed by or associated with an entity, identified on any Sanctions list (including without limitation the U.S. Department of Commerce's Denied Persons or Entity List, the U.S. Department of Treasury's Specially Designated Nationals or Blocked Persons Lists, or the U.S. Department of State's Debarred Parties List).
- j. The funds used in the purchase of DWS will be made only in your name, from a digital wallet not located in a country or territory that has been designated as a "non-cooperative country or territory" by the Financial Action Task Force or any similar legislation.
- k. You are purchasing, holding and/or using DWS to participate in the DWS Platform and to obtain services on the DWS Platform, as well as to support the research, design and development of, and advocacy for an open sourced blockchain-based infrastructure level protocol for a Credit-based, decentralised peer to peer sharing economy, creating an entirely unbiased mechanism where anyone may freely share and trade. You are not purchasing, holding or using DWS for any other uses or purposes, including, but not limited to, any investment, speculative or other financial purposes.
- l. You acknowledge that the funds paid to us for the purchase of DWS will be held by us (or our affiliate) after the token sale, and you will have no economic or legal right over or beneficial interest in these contributions or the assets of that entity after the token sale.

You hereby acknowledge that the Seller has entered into these Terms in reliance upon your representations and warranties being true, accurate, complete and non-misleading. The Seller does not and does not purport to make, and hereby disclaims, all representations, warranties or undertaking to you in relation to the sale of DWS or otherwise. Prospective purchasers of DWS should carefully consider and evaluate all risks and uncertainties (including financial and legal risks and uncertainties) associated with the DWS token sale, the Seller, and any relevant Group Entity.

8. INTELLECTUAL PROPERTY

The Seller (or the relevant Group Entity, as the case may be) retains all right, title and interest in all of that entity's intellectual property, including, without limitation, ideas, concepts, discoveries, processes, code, compositions, formulae, methods, techniques, information, data, patents, models, rights to inventions, copyright and neighbouring and related rights, moral rights, trademarks and service marks, business names and domain names, rights in get-up and trade dress, goodwill and the right to sue for passing off or unfair competition, rights in designs, rights in computer software, database rights, rights to use, and protect the confidentiality of, confidential information (including know-how and trade secrets), and all other intellectual property rights, in each case whether patentable, copyrightable or protectable in trademark, registered or unregistered, and including all applications and rights to apply for and be granted, renewals or extensions of, and rights to claim priority from, such rights and all similar or equivalent rights or forms of protection which subsist or will subsist now or in the future in any part of the world. You may not use any of the Seller's (or the relevant Group Entity's) intellectual property for any reason whatsoever.

9. INDEMNITY

To the fullest extent permitted by applicable law, you will indemnify, defend and hold harmless the Seller, each Group Entity, and their respective past, present and future employees, officers, directors, contractors, consultants, equity holders, suppliers, vendors, service providers, related companies, affiliates, agents, representatives, predecessors, successors and assigns (the **Indemnified Parties**) from and against all claims, demands, actions, damages, losses, costs and expenses (including legal fees on an indemnity basis) arising from or relating to:

- a. your purchase (whether through an intermediary or otherwise), holding or usage of DWS;
- b. your responsibilities or obligations under these Terms;
- c. your violation of these Terms;
- d. your violation of any rights of any other person or entity; or
- e. your subsequent sale of DWS to any individuals or entities.

10. RELEASE

To the fullest extent permitted by applicable law, you release the Seller and the other Indemnified Parties from responsibility, liability, claims, demands and/or damages (actual and consequential) of every kind and nature, known and unknown (including, but not limited to, claims of negligence), arising out of or related to disputes between users and the acts or omissions of third parties. You expressly waive any rights you may have under any statute or common law principles that would otherwise limit the coverage of this release to include only those claims which you may know or suspect to exist in your favour at the time of agreeing to this release.

11. GOVERNING LAW AND DISPUTE RESOLUTION

These Terms will be governed by and construed and enforced in accordance with the laws of Singapore, without regard to conflict of law rules or principles (whether of Singapore or any other jurisdiction) that would cause the application of the laws of any other jurisdiction. Any dispute arising out of or in connection with these Terms (including without limitation the enforceability of this arbitration Clause, any question regarding existence, validity or termination) shall be referred to and finally resolved by arbitration administered by the Singapore International Arbitration Centre (**SIAC**) in accordance with the Arbitration Rules of the Singapore International Arbitration Centre (**SIAC Rules**) for the time being in force, which rules are deemed to be incorporated by reference in this arbitration Clause. The seat of the arbitration shall be Singapore. The Tribunal shall consist of 1 arbitrator. The language of the arbitration shall be English.

12. PARTIAL INVALIDITY

If, at any time, any provision of these Terms is or becomes illegal, invalid or unenforceable in any respect under any law of any jurisdiction, neither the legality, validity or enforceability of the remaining provisions nor the legality, validity or enforceability of such provision under the law of any other jurisdiction will in any way be affected or impaired.

13. TERMINATION

The agreement set out in these Terms will terminate upon the completion of all sales of DWS. The Seller reserves the right to terminate the agreement set out in these Terms, in its sole discretion, in the event of a breach by you of these Terms. Upon termination of these Terms:

- a. all of your rights under these Terms immediately terminate;
- b. you are not entitled to any refund of any amount paid whatsoever, save in the case where these Terms are terminated by the Seller without any breach by you of these Terms; and
- c. Clauses 3, 4, 6, 9, 10, 17, 18 and 19 will continue to apply in accordance with their terms.

14. ENTIRE AGREEMENT

These Terms, including the documents and material incorporated by reference, constitute the entire agreement between you and the Seller and supersedes all prior or contemporaneous agreements and understandings (including without limitation the Whitepaper or any other marketing material), both written and oral, between you and the Seller with respect to the subject matters. We may make changes to these Terms from time to time as reasonably required to comply with applicable law or regulation. If we make changes, we will as soon as practicable post the amended Terms at the Website. The amended Terms will be effective immediately. It is your responsibility to regularly check the Website for any such amendments.

15. ASSIGNMENT

You shall under no circumstances be entitled to assign or novate your rights and obligations under these Terms (including without limitation the right to claim any DWS purchased). We may assign or novate our rights and obligations under these Terms without your consent, and you agree to, at your own expense, take whatever action or execute any document which the Seller may require for the purpose of effecting any such assignment or novation by the Seller.

16. REMEDIES AND WAIVERS

No failure to exercise, nor any delay in exercising, on our part, any right or remedy under these Terms Documents shall operate as a waiver, of any such right or remedy or constitute an election to affirm these Terms. No election to affirm these Terms on our part shall be effective unless it is in writing. No single or partial exercise of any right or remedy prevents any further or other exercise or the exercise of any other right or remedy. The rights and remedies provided in these Terms are cumulative and not exclusive of any rights or remedies provided by law.

17. DISCLAIMERS

- a. You expressly acknowledge, understand and agree that you are purchasing (whether through an intermediary or otherwise), holding and/or using DWS at your sole risk and discretion, and that DWS is provided, used and purchased on an "AS IS" and on an "AS AVAILABLE" basis without any representations, warranties, promises or guarantees whatsoever of any kind by the Seller or any Group Entity. Prior to making any decision to purchase (whether through an intermediary or otherwise), hold and/or use DWS, you shall conduct your own due diligence and rely only on your own examination and investigation thereof.
- b. Changes in relevant laws and regulations in any jurisdictions which we are operating shall constitute a force majeure and we will not be responsible for any result arose out of such changes in relevant laws and regulations.
- c. We do not make and expressly disclaims all representations and warranties, express, implied or statutory; and with respect to DWS, we specifically does not represent and warrant and expressly disclaims any representation or warranty, express, implied or statutory, including without limitation, any representations or warranties of title, non-infringement, merchantability, usage, suitability or fitness for any particular purpose, or as to the workmanship or technical coding thereof, or the absence of any defects therein, whether latent or patent. In addition, we cannot and do not represent or warrant that DWS or the delivery mechanism for DWS are free of viruses or other harmful components.
- d. We assume that you have already read these Terms, especially the risks and disclaimer stated herein and hereunder, and you shall automatically be regarded agree to take all risks (including but not limited to the risks stated herein) in relation to purchasing (whether through an intermediary or otherwise), holding and/or using DWS.

18. SELLER NOT LIABLE

DWS is not being structured or sold as securities or any other form of investment product. Accordingly, none of the information presented in these Terms is intended to form the basis for any investment decision, and no specific recommendations are intended. Save in the case of fraud or gross negligence, the Seller expressly disclaims any and all responsibility for any direct, indirect, special, incidental, consequential or exemplary loss or damage of any kind whatsoever arising directly or indirectly (including without limitation, those relating to loss of revenue, income or profits, loss of use or data, or damages for business interruption) in connection with:

- a. reliance on any information contained in these terms;
- b. any error, omission or inaccuracy in any such information;
- c. any action resulting from such information; or
- d. the sale or usage of DWS.

In no event will the aggregate liability of the Seller and the Indemnified Parties (jointly), whether in contract, warranty, tort, or other theory, arising out of or relating to these terms or the usage of or inability to use DWS, exceed the amount you pay to us for DWS.

19. CLAIMS

The Seller shall not be liable in any way or in any event in respect of any claim under these Terms if such claim was not made within the 6-month period commencing from the date that you receive DWS (the **Claim Period**). Any claim which has been made before the expiration of the Claim Period shall, if it has not been previously satisfied in full, settled or withdrawn, be deemed to have been withdrawn and shall become fully barred and unenforceable on the expiry of the period of six (6) months commencing from the date on which such claim was made, unless proceedings in respect thereof shall have been commenced against the Seller and for this purpose proceedings shall not be deemed to have been commenced unless they shall have been issued and served upon the Seller.

For the avoidance of doubt, nothing in these Terms shall limit your obligation (at law or otherwise) to mitigate your loss in respect of any claim under these Terms, and you shall not be entitled to recover damages in respect of any claim (as the case may be) if, and to the extent that, you have already recovered damages in respect of the same fact or subject matter.

20. PARTNERSHIP

Purchasing (whether through an intermediary or otherwise), holding and/or using DWS does not create any form of partnership, joint venture or any other similar relationship between you and us.

21. RIGHTS OF THIRD PARTIES

Except as otherwise provided in herein, these Terms are intended solely for the benefit of you and us and are not intended to confer third-party beneficiary rights upon any other person or entity. A person

who is not a party under these Terms has no right under the Contracts (Rights of Third Parties) Act, Chapter 53B of Singapore to enforce or to enjoy the benefit of any term of these Terms. Notwithstanding the foregoing, any Group entity shall be entitled to enforce or to enjoy the benefit of any term of these Terms.

22. LANGUAGE

You acknowledge that, solely for convenience, these Terms may be translated into a language other than English, and that a copy of the English language version of these Terms has been provided to you (which have read and understand). In the event of conflict or ambiguity between the English language version and translated versions of these Terms, the English language version shall prevail.

23. SEVERABILITY

If any provision or part-provision of these Terms is or becomes invalid, illegal or unenforceable in any respect under any law of any jurisdiction, it shall be deemed modified to the minimum extent necessary to make it valid, legal and enforceable. If such modification is not possible, the relevant provision or part-provision shall be deemed deleted. Any modification to or deletion of a provision or part-provision pursuant to this Clause shall not affect or impair the validity and enforceability of the rest of these Terms, nor the validity and enforceability of such provision or part-provision under the law of any other jurisdiction.

24. NOTICES

You agree and acknowledge that all agreements, notices, disclosures, and other communications that we provide to you, including these Terms, will be provided in electronic form.

These Terms have been entered into for and on behalf of the Seller. If you have any questions regarding these Terms, please contact us at dwsofficial@dwswifi.com.