



DREX

Digital Real Estate Xchange aka DREXchanges

The Global Real Estate Exchange of the Future.



This paper does not reflect the current state of the DREX protocol. We will continue hosting / modifying this draft and SHOULD NOT be used as a reference. For updated white paper please refer to www.DREXchanges.com, initially released May 26, 2021 and updated July 27, 2021.



ABSTRACT:

This paper describes an all in one online remote fully comprehensive real estate asset transactional transfer platform using Smart Contracts, Blockchain and Invitational Secured Internal Protocol (“ISIP”), for data collaboration sharing and messaging. DREX via the DREXchanges is a proposed platform that its implementation is intended to increase transactional security of information, increase transactional efficiencies by way of reducing unnecessary 3rd party intermediaries, wastefully manhours of re-data entry and reduction of typographical errors, reducing overall transaction turn time timeline, while providing verification and validation of all parties involved in the real estate transaction / transfer, be it buyer(s), seller(s), or professional service provider(s).

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INTRODUCTION:

Industry Background

Throughout history, the world has known that real estate has always been the greatest store of value. Real estate has created wealth for those who own it and even more wealth for those who know how to use it, to produce greater wealth by the value from it. Owning real estate depending on its location can create various streams or forms of income for its owner. As real estate values increase from decades to centuries with the supply quantity on earth remain the same, the values are not going down anytime soon. Over time buying, selling, or even transferring real estate has changed. From the transfer of ownership by way of trading item(s) of value (ie, gold, money, or some other form of value the sell would consider value) for real estate ownership (paper or acknowledgment of ownership of the said real estate) to now a writing an offer to purchase along with an intricate of acknowledgments, disclosures, and representation clauses. This along with the population increasing, providing more buyers along with the amount of manpower required to complete each task has increased the time to transfer real estate from one owner to another. This is not to include the number of professional real estate market participates required to close a single transaction, with each having to use their own program or software needed to create their required forms, document, and disclosures. The many participates tend to reenter the same information in their own system, causing excess unnecessary work. As more regulations, disclosures get added to the many already required disclosures it has pushed more market participants to do more work, correspond with more people using different systems, some secure, some not secured or encrypted. We believe there is a much better way of doing business that would be much faster and much more secure, for all parties.

THE PROBLEMS

Data reflects “The global real estate market is estimated to be worth \$280.6 trillion in total” (*1), with “22% of the world’s total residential asset value is in North America – even though only 6% of the population lives there.” The date also indicates that global residential real estate is estimated at \$220 trillion, global commercial is estimated at \$33 trillion while global agricultural real estate is estimated at \$27 trillion. Liquidity of real estate is one of the major differentiators to other major asset classes. The time it takes to sell other assets classes like government bonds, stocks, securities or equities compared to liquidating a real estate asset is non comparable. The efficiency and requirement needed to properly sell real estate could vary from 10 days to 30 days depending on the location of the real estate. The problem of time delay to transfer real estate ownership is not the only issue. The major issues is the entire real estate transfer process, it’s infrastructure required by participants from beginning to end of the transfer is the problem, the security of personal information, use of un-encrypted messaging platforms, the

programs and software which do not communicate with each other that creates excessive manhours with the potential of errors. The general issues regarding real estate transfers and exchanges are listed below.

(*1) – Visualcapitalist.com 2020 – All of the world’s money and markets in one visualization.

<https://www.visualcapitalist.com/all-of-the-worlds-money-and-markets-in-one-visualization-2020/>

General issues:

1. All services participate providers use different software which do not communicate with each other. This causes for re-inputting of similar data which in turn can lead to typographical errors, by any one party. Re-entry of similar data will also cause delay of transaction, excess of unnecessary manpower for the same task.
2. Service participates / providers use different types of communication and sometime the communication method used is not a secured method type (ie, real estate agent or mortgage professionals using personal email). If any service provider uses a non-encrypted or unsecured method to send/receive any critical or personal information would be make that data/information vulnerable, to any interception from hackers. This can be just basic information like the authorization to run credit by way of providing name, social security number, date of birth and current address, to just providing an email with last 2 years taxes and bank statements to the lender. In both cases a hacker or interceptor could use the information at their free will. From the beginning of a real estate transaction a buyer or seller use their personal email to transmit their personal data. The first contact of a home seller or buyer is normally to their real estate agent or mortgage professional, unless they were intercepted by a non-licensed marketing firm whose goal is to obtain a client then to pass on to a licensed professional for a fee. These marketing companies who should not obtain or acquire any personal information from the seller or buyer. Unfortunately, buyers and sellers alike do not normally look up or research nor even know if the person they initially transact with are licensed or not. Over the last few years most buyers tend to respond to advertisement or social media marketing ads when looking to purchase a home or even get qualified, unless they were strongly recommended by a family friend or relative, but even then, they do not even know if someone is licensed or not.
3. Multiple service providers servicing the client let it be lender, escrow or realtor tend to store client documents on their own storage system. By doing this the client’s information is stored in multiple storage platforms which creates a higher percentage for data breach.
4. External electronic signature platforms used for buyers & sellers to sign without properly venting identity of signer beside name & email address, which does not secure the validity of the signer.
5. No license validation system in place to make home buyers and sellers aware they are do business with licensed or unlicensed person. Unlicensed service providers

participating within the industry, of which could lead to the unauthorized use of buyer(s)/seller(s) personal data.

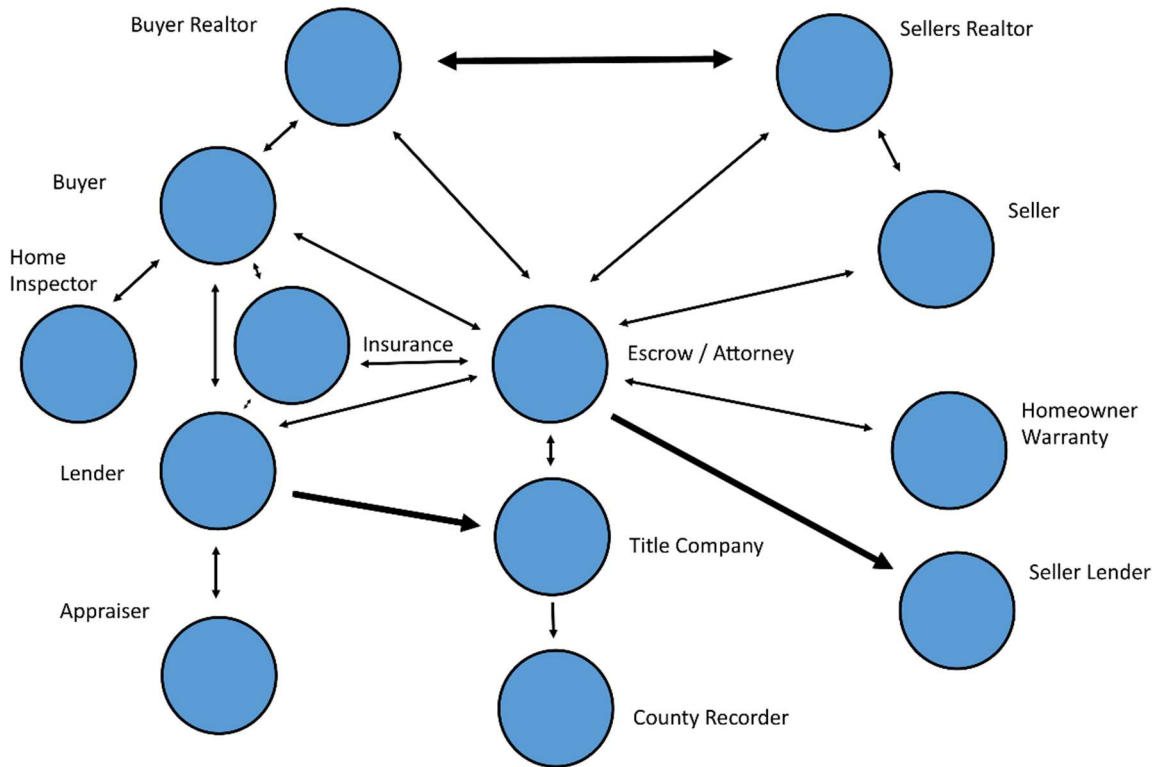
6. Unverified service providers/professional and participates could be involved until discovered.

Within the standard real estate transaction there are several participates involved in different capacities, which are required / needed to complete a signal transaction. The participates required / needed vary based on the arranged agreement between the buyer and seller of the transaction, for the real estate asset. Below is a list of participates based on a standard transaction that is being financed with a licensed real estate agent representing each the side of the transaction (seller, buyer), whereas the minimal participants needed to complete a transaction will be marketed with a “*”:

1. Seller*
2. Buyer*
3. Seller’s Real Estate Agent
4. Buyers Real Estate Agent
5. Escrow Office / Attorney
6. Notary*
7. Buyers Lender
8. Non-Profit (If buyer has obtained down payment assistance via nonprofit organization)
9. Lenders Appraiser
10. Buyer Home Inspector
11. Buyers Homeowners Insurance Company
12. Title Company
13. Homeowners Warranty Company
14. Title Company
15. County Recorders Office / Land Recording Registry*

Thou not recommended to sell or buy a home with the minimal participant as many checks and balances are used to validate the validity of the buyer, seller as well most importantly the real estate asset, to include true ownership, liens and judgements against the owner that is attached to the real estate asset including federal or local municipality liens or judgements.

Current Real Estate Purchase Transaction Flow

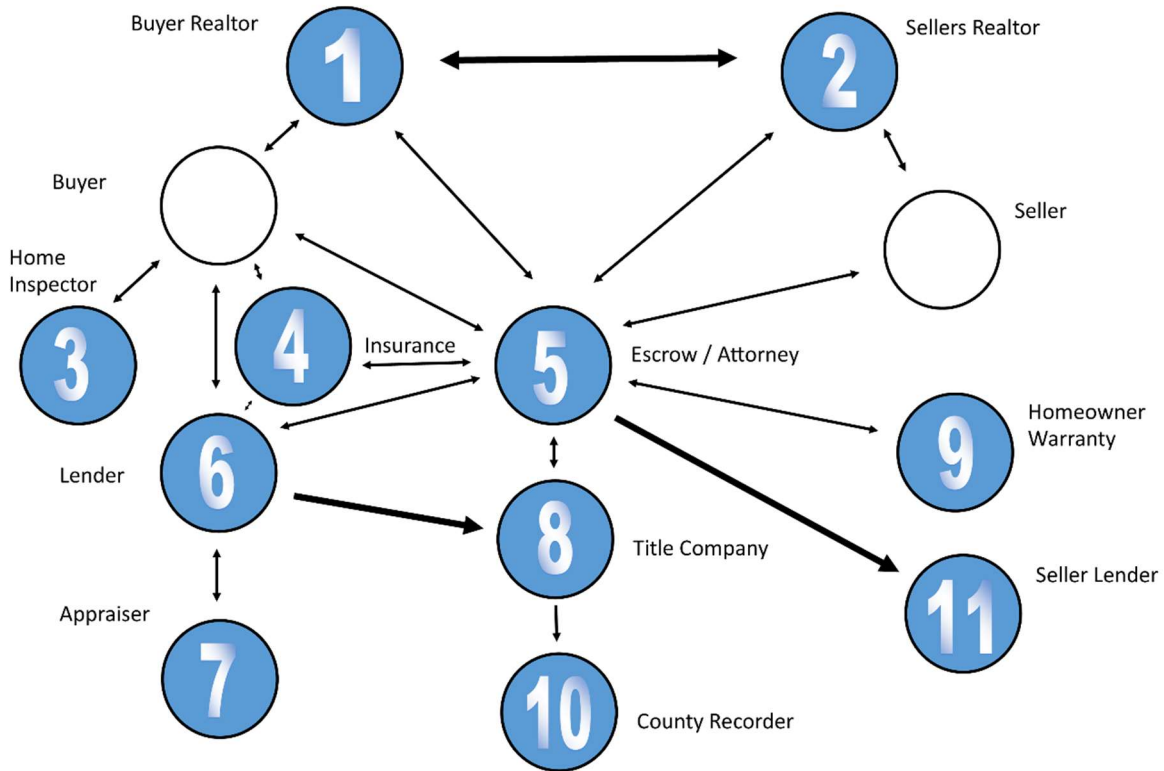


Traditional Real Estate Transactional Flow

As you can tell based on the illustration above there are a noticeable amount of real estate service professionals, that are needed to close a single transaction. Keeping this in mind with the understanding that every service provider has and will use their own system, to complete their tasks. By understanding that the number of service professional above cannot be reduced and the systems they use are required to complete the transaction, will one understand the level of error per transaction could be great. The reason why the level of error per transaction could be great is attributed by a few things. For one, each service provider must input data in their system even though that same data was inputted on another system with a different service provider, on the same transaction. This allow not only create duplicate entry of the same information but on different systems but also increases the manhours required to complete a single real estate transaction.

Of the most notable duplicated data on a single real estate transaction, we have calculated the following information inputted more than once, on a single transaction, conservatively. The illustration below reflects the number of systems used to completely single real estate transaction.

Current Purchase Transaction Systems



Number of Systems Used By Real Estate Professionals Based on Service Provided

From the above illustration you can see there are about 11 systems used on a single real estate transaction. Each individual system used does not communicate one other and is used on a per professional / transaction bases. As each professional is required their own professionalized system some / the majority of transactional required data to be re-entered, duplicated, triplicated or even multiple times over, like 10 to 15 times, depending on the data. For instance some data like buyer(s) name, real estate property address and real estate parcel number is entered up to 15 times on average (as indicated below with “*”). This would not only consider a waste of manpower but has a high likelihood of obtaining typographical errors. For some locations that are known with 2 names based on a government city retaining a county locality could cause additional name correction in each individual city. For example, here is California the City of Rancho Cucamonga acquired a local unincorporated area called Alta Loma that was adjacent to the city. While perform a service for a real estate owner within the Alta Loma area there was a confusion within the lender, appraiser, escrow, and title company as to the real estate property city address. While some systems were entered in as Rancho Cucamonga other service providers had Alta Loma entered. After verification and validation half of the

service providers had to go back in their own professional service system and correct the city name. If a communication system like DREX was used only one person would have to correct the city name but before the name would have to even be corrected each service provider would only have to validate the data being correct without ever have to enter the data, as the data would have already be entered from the initiating professional who started the transaction. This is not to include additional 3rd party systems some professional service providers use like DocuSign and eFax for lender payoff requests.

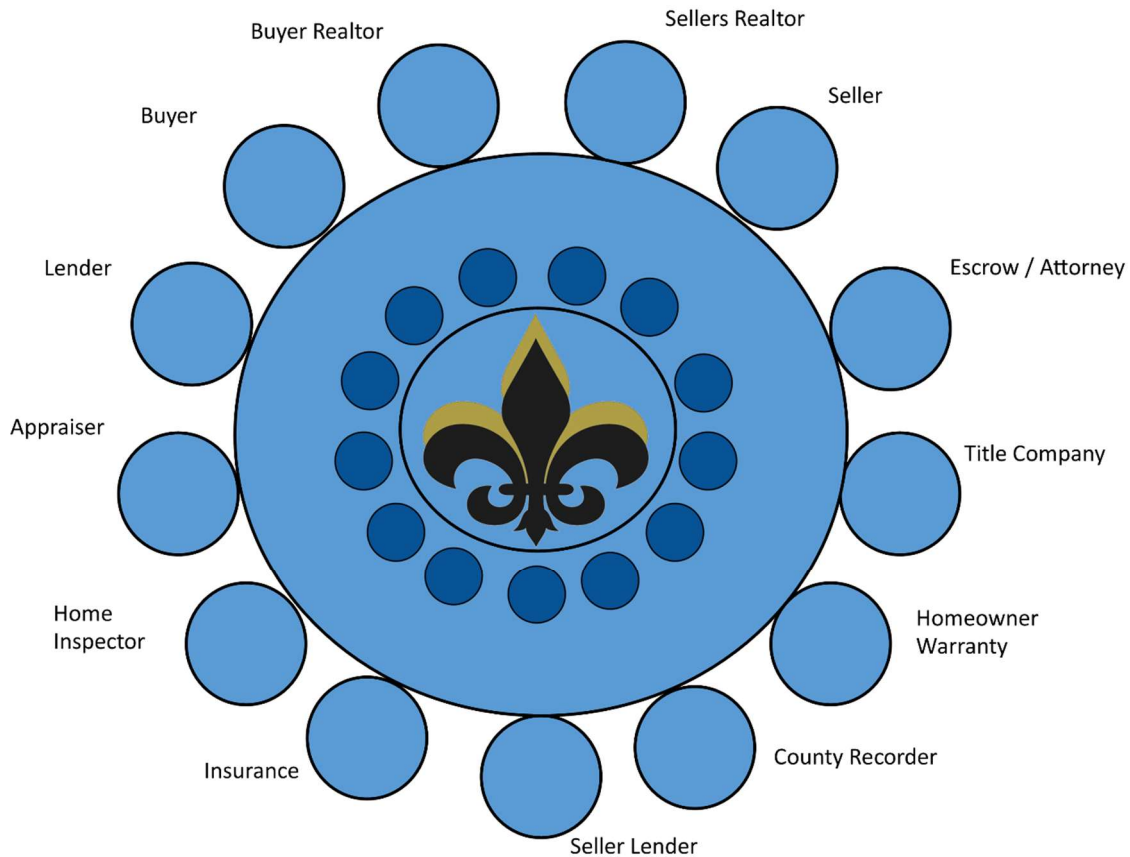
Here is the list of data entry items that are entered more than once, in order to complete a signal real estate transaction:

<u>Data Entered</u>	<u>Min/Max</u>
Buyers Agents Email Address	3-5
Buyers Agents License Number	3-5
Buyers Agents Name	3-5
Buyers Agents Office Address	3-5
Buyers Agents Office License Number	3-5
Buyers Agents Office Name	3-5
Buyers Agents Phone Number	3-5
Buyers Email Address	3-5
Buyers Name*	10-15
Buyers Phone	5
Lender's Name	2
Listing Agents Email Address	3
Listing Agents License Number	3
Listing Agents Name	3
Listing Agents Office Address	3
Listing Agents Office License Number	2
Listing Agents Office Name	3
Listing Agents Phone Number	3
Real Property Address of subject to be sold*	10-15
Real Property Assessor's Parcel Number*	10-15
Sellers Address	2
Sellers Email Address	2
Sellers Name	5
Sellers Phone	2

THE SOLUTION

1. Buyer(s), Seller(s), Mortgage or Real Estate professional will be able access DREXchangeS to invite other participates in the transaction. For Example, a buyer could invite their Mortgage Lender, Real Estate Agent, or both to access their initiated transaction, or vice versa, to where the Mortgage Lender or Real Estate Agent could invite the buyer or each other to the platform. This will allow a separate secured online remote communication channel via participates.
2. DREXchangeS platform provides a secure communication like a standard email to communicate messages and allow document / image attachments via transmittal but with all security needed to protect data via verified service providers, as all real estate service providers and their companies' licenses would be verified and validated by the DREXified system within the DREXchangeS Protocol.
3. DREXchangeS will allow all service provider(s) to create all necessary service documentation based on their line of service within the protocol platform. This will eliminate multiple platforms and unnecessary cost, multiple data entry, time delay of document creation, receiving, sending documentation, electronic signature requests and much more.
4. DREXchangeS will verify and validate roles, user access and authority. Allow layered data inputting entry, data verification & validation, service provider to service provider internal communication, document signing.
5. DREXchangeS will store all service documentation within one system within an encrypted platform where only authorized users can view and retrieve if necessary. All personally protected data will only be available to only authorized users within the transaction via layered protection, on a validation bases only.
6. Transactional turn time reduced by all parties to finalize and close transaction.
7. Verification & validation of each party's license to do business so all parties acknowledge that each party holds a valid license, to do business within the service provided. This is to elimination / reduce fraud while ensuring valid licensing of parties.

DREX Real Estate Purchase Transaction Systems



In order to accomplish the DREX

THE RESULTS

DREX will provide many benefits that will enhance the overall buyer(s) and seller(s) experience as well as the transfer process for all real estate service professional involved in the sale/transfer of the real estate asset. DREX benefits include:

1. An efficient and secured communication between all parties.
2. The
3. The elimination of multiple service providers to produce service documentation that will reduce overall cost.
4. The reduction of typographical errors by way of eliminating the re-entry of similar data.
5. The verification and validation of information data entered.
6. A system verification and validation of licensed professionals and their companies to prevent unlicensed participants.

The basic and minimal standard real estate participants involved in transferring real estate assets are:

1. The Real Estate Owner(s) / Representative that the real estate asset is being transferred from.
2. The New Owner(s) / Representative that the real estate asset is being transferred to.
3. The County Land Registrar Office also known as the County Recorders Office
4. Sometimes an Attorney or Escrow Company who drafts and sometime who also sometimes notarizes the required documents needed to modify or transfer the real estate.
5. Notary Public who notarizes the required documents in case the Attorney or Escrow Company above did not notarize the required documents.

Below is a list of real estate service professionals with a brief obligatory duty, when selling a real estate asset on the traditional market. This is what a standard real estate sales transaction looks like, where a seller retains a real estate agent list and market a real estate asset for sale and a buyer is working with a separate real estate buyer agent, to where the buyer is also obtaining a new loan with a lender for the real estate purchase, with all the services being rendered during the home purchase process.

- 🏡 TRADITIONAL REAL ESTATE SALES PARTICIPATES AND SERVICE PROVIDERS
- 🏡 Current Real Estate Owner / Seller – who is selling their ownership interest of real estate.
- 🏡 Real Estate Agent (Listing Agent) – who is representing the seller in the sale of the owner’s real estate.
- 🏡 New Real Estate Owner / Buyer – who is buying the real estate from the seller.
- 🏡 Real Estate Agent (Buyers Agent) – who is representing the buyer in the purchase of the real estate.
- 🏡 Lender – who is providing the funding for the buyer to purchase the real estate by way of a loan.
- 🏡 Escrow/Attorney – who is a neutral 3rd party that works in behalf of the seller/buyer agreed contract
- 🏡 Title – is an insurance company that insures a clear title of ownership for the buyer.
- 🏡 Notary – is a sworn public official that notarizes the legal documents of the transfer on real estate.

- 🏠 Appraiser – provides a written analysis of the real estate value to both buyer and buyers lender.
- 🏠 Home Inspector – inspects and provides a report of condition of the real estate that is being transferred.
- 🏠 Homeowners Insurance -provides real estate insurance for the real estate asset, for the buyer.
- 🏠 Home Warranty – provides a home warranty to the buyer for the real estate asset, for the buyer.
- 🏠 County Recorder / Land Registrar’s Office – that records the transaction from seller to buyer.

THE FUTURE OF GLOBAL REAL ESTATE EXCHANGE

The number of real estate sales transactions and exchanges is enormous. This growth is contributed based on the constant growth of population and new home builders. People and families are purchasing from within the same city, to across states and countries. DREXchanges will allow more homeowners and professionals to correspond and handle the entire real estate transaction on one platform across the globe, securely. DREXchanges will save all parties time, money, and the headache of trying to find the email or message with that important document you know you sent or received, which is needed to buy, sell or exchange the real estate asset.

SMART CONTRACT IMPLMENTATION

In the beginning DREX will initially start by implementing the real estate purchase contract along with the traditional real estate disclosures, for licensed real estate professionals to use, as the initiating source to begin their contractual agreements and collaboration. Currently real estate professionals use the same system within regions, but these systems do not communicate

DECENTRALIZED P2P SYSTEM

Sometimes a real estate transaction does not need a licensed real estate professional involved in the sale or transfer of the real estate asset. For this instance, the buyer or seller could initiate the transaction by invite within each other while inviting a licensed 3rd party escrow to facilitate the exchange. The seller or buyer can also invite other licensed 3rd party professionals, like an licensed appraiser to value the property if the transaction requires no financing.

REGULATION

DREXchanges will comply with all federal, state, and local regulation as a tech and software company.

DREX PLATFORM PROTOCOL – V1

DREX – ONLINE SYSTEM STORE FRONT

The best way for real estate sellers, buyers including real estate professional to meet is when they see a property for sale online. This starts the initial conversation as well as the interest to purchase a particular real estate asset. The DREXchanges system store front is an online real estate marketplace where real estate assets are posted for sale via the local multiple listing services. Buyers will be able to view property pictures, details of the property to include property characteristics as well as property taxes and contact information regarding listing agent.

COMPLEMENTARY SYSTEM

As DREX will display all approved listing from the multiple listing service complementary all licensed agents with listings will have the ability to setup their access for their basic complementary system. This will allow the listing agent to correspond with prospective buyers via the DREXchanges. while having their listing displayed on the DREXchanges on a complementary level. The best way for real estate sellers, buyers including real estate professional to meet is when they see a property for sale online. This starts the initial conversation as well

DREX ISIP – INVITATIONAL SECURE INTERNAL PROTOCOL

The basic communication pertaining to a real estate transaction as well as data sharing, transferring of information or documentation is vital to the completion of a transaction. While the basic communication could be harmless the small details and personal information being shared or transferred could be very dangerous if intercepted from hackers. In the majority of cases the professional service providers like real estate agents, loan officers and escrow companies use their own systems to communicate. Sometimes these systems are unsecured email platforms, personal emails or even corporate email accounts where the email accounts were purchased from a large corporate entity.

The DREX ISIP is an Invitational Secure Internal Protocol system designed by the DREXchanges creators. The ISIP system is an online remote protocol that allows the

buyer, seller and or licensed professional to initiate the transaction by inviting the other party(ies) to participate in a certain transaction, where all communication, data sharing and transfer of information can occur securely. Only the invited parties will have access to the transaction, so there is no worries that you emailed your personal information to the wrong person or email.

SMART CONTRACT ARCHITECTURE

After the buyer(s), seller(s) and 3rd parties are accepted / invited within the transaction via ISIP the parties can create the smart contract within the protocol. As licensed professionals are invited each licensed independent service provider can create their own smart contract required for their service industry on the transaction, with the information already entered that was validated within the DREXchanges platform. For example: if a buyer sees a real estate asset on the DREXchanges Online Store Front and wants to write an offer, after inviting/contacting an agent via the DREXchanges ISIP system. The agent would write the offer within the DREXchanges to be submitted to the listing agent via ISIP. The listing agent would then be able to view, download or print the offer to present to the seller. If the offer were to be countered from the seller the listing agent would counter the offer within the DREXchanges platform. Upon acceptance the listing agent and buyer's agent would then confirm offer acceptance with the documentation within the DREXchanges platform. At this time either listing agent or buyer's agent could invite next required licensed service professional (ie., escrow, attorney office, lender). After the next service professional is accepted within the ISIP protocol they can begin creating/finalizing their own smart contract required for the transaction without ever having to re-input data already validated within the DREXchanges platform. For every ISIP required each licensed service professional would not have to re-input previously inputted data that was already validated, unless the new ISIP recipient invited obtains / recognizes information / data to the contrary, to which they would not validate the data/information but mark discrepancy with a note as to what the discrepancy is (ie., Name misspelled, address spelling incorrect, wrong city). At this point the licensed professionals representing the side of the transaction (buyer side or listing side) need to revalidate the information along with the 3rd parties to obtain 100% contentious.

The ISIP along with smart contract completion will keep occurring until all required licensed professional service providers required to complete the transaction complete all required tasks.

DATA GUARD SHARE STANDARDS

The only data shared is the data the buyer(s) or sellers provide to their associated Licensed Professional Service Provider (ie., Buyer's Agent, Listing Agent, Loan Officer or Escrow Officer). No data is shared on any open source as all data uploaded or shared is closed via DREXchanges Data Guard Share Standards.

DREXIFIED SYSTEM – PROFESSIONAL VERIFICATION & NFT CREDENTIALS

We ensure the licensed professionals who use DREXchanges on a professional service level have been verified with a valid license to provide the service they are providing. An approved licensed professional or company that has been vetted and validated is considered having been DREXified (Approved). Only after when a licensed professional is DREXified will they have the ability to obtain membership status by way of NFT credentials. This will allow them to full access all of DREXchanges systems, services and benefits that will allow them to work more efficiently.

DREXchanges V1 TRANSACTIONAL PROTOTYPE FLOW

The DREXchanges V1 will be going with the integration of the Online System Store Front, real estate assets listings from the Multiple Listing Service, Complimentary listing agent and buyer's agent communication platform and the DREXchanges ISIP for internal secured communication.

DREXchanges BUSINESS MODEL

As a real estate program software company designed to protect and preserve client data while providing a more proficient way of doing business. DREXchanges business model is designed to acquire market share of real estate, mortgage as well as 3rd party software programs used by industry professional within the real estate industry, while saving time, money while providing security.

DREX TOKEN

INTRODUCTION

DREXchanges protocol uses the token DREX as a requirement for some tasks. The DREX Token is used as a security item which only allows DREXified participants to access allowable transactions of which they have been invited to participate.

DREX TOKEN FLOW OVERVIEW

There are a few ways the initial DREX token can be initiated. In its simplest form here is what a basic DREX flow would look like.

1. A Licensed Real Estate Agent and/or Mortgage Professional that has been DREXified would purchase DREX tokens to initiate a secure DREXchanges transaction to where they can invite participants, like buyers, sellers as well as 3rd parties to the transaction.
2. A buyer finds a real estate asset they would like to purchase via the DREXchanges Online System Store Front. The buyer then would select the agent and property, which would initiate a token request from the buyer, for the agent to provide to begin the transaction, via Store Front.
3. Upon confirmation from the selected agent the buyer would obtain a requests to confirm identity via the know your client process, aka "KYC". At completion of the KYC process the system would create a client identity record profile.
4. DREXified Real Estate Agent and/or Mortgage Professional would invite other DREXified 3rd party professionals to collaborate within the DREXchanges online platform.

Note: Only certain DREXified licensed professionals could initiate a DREXchanges transaction while other DREXified license professionals have collaborative access. Also note the example above is one of many ways to initiate a DREXchanges transaction via a DREX token.

The DREX token flow begins with the buyer/seller who is interested in buying/selling a real estate asset via the DREXchanges website/application. A DREX Token is required for transaction initiated by licensed professionals who have been DREXified to open/start new transaction requested from buyer or seller. One DREX Token is required for each individual invite for every transactional participate, like buyer's lender, escrow, appraiser and/or home inspector to collaborate / access the DREXchanges platform, who has also been DREXified. Upon successfully completion of the DREXchanges transaction the DREX token will be sent back into market supply, minus the DREXchanges system usage fee.

DREXchanges SYSTEM USAGE FEE

For every DREX used within the DREXchanges protocol the system charges a usage fee of 0.0001 which reduces the DREX overall supply. Making DREX automatically inflationary based on usage.

DONATIONS & GRANTS

DREXchanges has yet to set donation allocation at this time but will provide future donations and/or grants for future developer/developments.

ECONOMIC MODEL

DREX has a fixed supply of 100 billion of which 45 billion will be locked in escrow, to which 1 billion will be released per month to maintain transactional supply / demand, cover cost of non-profit to manage scheduled release and providing non-profit income for providing relevant homeownership classes, course, workshop as well as homeownership counseling. Only 30 billion tokens will be issued at the initial of token distribution / sale. New tokens can not be created and existing tokens can not be burned/destroyed.

NETWORK GROWTH

DREX via DREXchanges network growth is based on market adoption worldwide by not only consumers but more importantly real estate professionals.

COMPANY

Initial distribution will be allocated as followed under the following conditions:

- ♣ 15% to be allocated & reserved for company
 - 12% distributed to founders
 - 3% allocated to Operations, Overhead, Product Development & Testing and Marketing, etc.
- ♣ 10% retained for corporate partnership & acquisitions
- ♣ 50% locked up in escrow to be released on schedule
- ♣ 30% available for purchase at launch

CONCLUSION

DREXchanges is designed with both consumer protection in mind as well as a more efficient way real estate transactions can be transacted, providing a better way for all parties to communicate, draft industry required documents while securing and protecting personal data while also providing a robust marketing platform with validated licensed professionals to conduct new and existing business.