

Crypto and the Condo: Purchasing Real Estate Through the Second United States NFT Auction

Charles M. Hilterbrand, Jr.
The University of Mississippi

Sergio Gárate
Emory University

ABSTRACT

A wife and husband real estate investment team found the perfect corporate rental property unit for sale in Tampa, Florida. The team with over two decades of property experience was convinced that he had seen just about everything with real estate transactions, they were wrong. The property under consideration was about to be the second real estate transaction in the United States sold as a non-fungible token (“NFT”) and the currency that was used was a cryptocurrency. The couple, who had a basic understanding of how cryptocurrencies worked, knew that they would have to learn about a new way of exchanging funds for real estate. There was a call for a crash course in NFT transactions and how those NFTs were used to acquire property. They were confident in their ability to perform real estate title due diligence, but using smart wallets with cryptocurrencies and smart contracts to buy an NFT that holds real estate was different.

Keywords: Non-fungible token (NFT), blockchain, cryptocurrency, real estate, real estate title, decentralized finance (DeFi)

Copyright statement: Authors retain the copyright to the manuscripts published in AABRI journals. Please see the AABRI Copyright Policy at <http://www.aabri.com/copyright.html>

INTRODUCTION

Sunday evening, April 10, 2022, Gabrielle Channell (“Gabrielle”) was sitting behind her laptop. Scrolling and tapping a finger near the left button on her mouse, Gabrielle’s two decades of real estate experience had not prepared her for this. Gabrielle deeply wanted this trendy Tampa, Florida condo. The property was ideal for corporate housing and an exact fit for her business model. This was the type of unit that could produce cash flow for decades due to its layout and upscale location. But this house was being sold as a Non-fungible Token (“NFT”), in a virtual auction set for April 12, and the only means of exchange was the use of cryptocurrency, which she did not have.

Gabrielle was toggling back and forth with her mouse between two monitor screens. One showed her bank’s website with wiring information in place. The other displayed the real estate auction platform for the condo. The auction platform website featured images of the property alongside an auction timer which displayed the start time for the auction as it relentlessly counted down. The bank website displayed a wiring authorization in the amount of \$235,000 to a cryptocurrency exchange company based out of Singapore. This group was an over-the-counter currency exchange group that Gabrielle and Ryan had just discovered days prior. Gabrielle had set up the wire based on a promise to quickly convert her US dollars to a cryptocurrency labeled USDC.

Gabrielle kept shaking her head while looking at the screen. Thoughts were swirling. She found herself asking her husband, Ryan Channell (“Ryan”), a series of questions. “Am I really sending real money by wire for something that is supposed to act like money? Am I money laundering? Will my money just disappear? How can I trust these people halfway around the world? Are we really going to bid on a house two days from now while we are in Texas at a horse show?”

With the auction clock ticking on one website and the wiring instructions with an enabled send button dominating the screen on the other website, the time for toggling and tapping was coming to an end.

THE PURCHASERS

Gabrielle and Ryan Channell were a couple of real estate professionals in the Florida market. The wife and husband team operated as partners in Channell Real Estate and Investments. While they worked as real estate brokers, they also maintained a portfolio of corporate rental properties. They had an extensive list of clients that wanted high-end properties with little to no maintenance. This was a lucrative and growing business for the couple, but it demanded an increase in inventory. They needed to acquire more units.

THE LISTING

The Multiple Listing Service (“MLS”) was a nationwide database where realtors placed property listings for sale. As a real estate broker, Ryan had access to MLS property listings. On April 7, while looking at listings in the Tampa Bay area, he came across the following listing for an online auction that was to be held on April 12:

“Cryptocurrency ONLY USDC! Extraordinary open floor plan, this immaculate 1 bedroom 1 bath condo is located in the heart of the gated community Hyde Park. Features of this

home include hardwood floors, over-sized walk-in closet, in-unit washer/dryer and 1 assigned parking space. The living room is warm and inviting, centered by a wood-burning fireplace and a door leading to the balcony. Your family and friends will enjoy the spacious outdoor area with a large swimming pool and spa-like jacuzzi, perfect for gatherings. Hyde Park has a historic neighborhood charm with tree-lined streets where you are conveniently located next to shops, dining and downtown Tampa. Residents are just a short drive away from the beaches! Note: on-going exterior renovations are in progress throughout the community. Listed by Taylor Parrino, Premier Elite Realty, Inc.”

“This condo would be the perfect corporate rental. We need this,” Ryan said to Gabrielle who immediately jotted down the listing information.

THE DUE DILIGENCE TITLE SEARCH

Gabrielle was armed with the property and parcel number information, as provided by the MLS, and wanted to do a quick title search. She visited the Hillsborough County Property Appraiser website and searched by the parcel number. Whereas Florida was a “disclosure state”¹, prior property transactions and their respective sales prices, if any, along with the type of conveyance document were posted on the county appraiser’s website. Gabrielle reviewed the subject property information and found the following transactions:

1. In January of 2022, the Hillsborough County Appraiser showed a property transaction with a purchase price of \$215,000 for a qualified transaction (which meant that it was an arms-length transaction) and a link to Instrument Number 2022040908. This document was a warranty deed that transferred the property to Propy LLC, a Delaware limited Liability company. The deed appeared to be a normal warranty deed, but there was a QR code and a Smart Contract Code that was based on the Public Ethereum Blockchain placed in the upper left-hand corner of the first page.
2. In March of 2022, the Hillsborough County Appraiser showed a property transaction with a purchase price of \$100 unqualified (which meant that it was not an arms-length transaction) and a link to Instrument Number 2022163592. This document was a quit claim deed that transferred the property from Propy LLC, a Delaware Limited Liability Company to p0003 NFT LLC, a Delaware Limited Liability Company FKA Propy LLC, a Delaware Limited Liability Company. The deed appeared to be a normal quit-claim deed, but there was a QR code and a Smart Contract Code that was based on the Public Ethereum Blockchain placed in the lower left-hand corner of the first page.
3. She did not find any mortgages or other liens on the property.
4. A quick look at the Hillsborough County Tax Collector’s site showed that the real estate taxes in the amount of \$1,857.28 were paid for tax year 2021.

CONTACTING THE REAL ESTATE AGENT

Satisfied that the cursory title search produced no red flags, Gabrielle grew excited about the property. She was prepared to register for the auction. At this point, Gabrielle believed this

¹ Section 201.02(1)(a), Florida Statutes requires a Documentary Stamp Tax. Amount varied by location. In all Florida counties except Miami-Dade, the tax rate imposed on documents subject to tax was 70 cents on each \$100 or portion thereof of the total consideration. This required the disclosure of the sales price information to the county which becomes public record.

was an online auction that was similar to a traditional auction with the only difference being the preferred currency. “I can just convert my dollars to bitcoin or whatever crazy currency they wish to use and buy the property,” she thought. Gabrielle contacted the real estate agent Taylor Parrino (“Parrino”).

Gabrielle asked Parrino about the property. Parrino described the property, told Gabrielle that the property was available for a showing, and then asked, “Are you ready to by an NFT?” “A what?” said a confused Gabrielle.

“Let me describe the process for this transaction,” replied Parrino.

THE REAL ESTATE AGENT’S DESCRIPTION OF THE NFT SALES PROCESS

Parrino explained that the property was being sold as a Non-Fungible Token (“NFT”). Parrino told Gabrielle that this was going to be the second ever NFT property sale in the United States. This property was going to be sold as an NFT auction and that blockchain technology and smart contracts were to be used to transfer the property.

Parrino pointed out that she was a crypto certified real estate agent. Parrino had the ability to explain this type of transaction and that she was able to facilitate the meeting the requirements of buyers and sellers in this type of transaction. Parrino was crypto certified through education facilities that were provided by Propy, LLC (“Propy”).

The property owner signed documents to authorize Parrino to list the house on MLS, to place the property in the Propy Marketplace, to authorize the type of currency that the seller will accept, and the authorization to sell the property as an NFT.

The property owner, through Parrino, hired Propy to NFT the property. Propy had a title search performed to verify that the property was owned by the original property owner and verified that the property was “free and clear” of liens and that all property taxes were paid and current through the time of the proposed auction.

In this particular case, to test this system, Propy actually bought the property outright in January. The property owner was, in fact, Propy. Propy acquired an owner’s policy of title insurance in the name of Propy LLC, a Delaware limited liability company in the amount of that purchase price of \$215,000.00.

Propy, as property owner, signed NFT paperwork which included authorization to Propy to serve as administrator of a limited liability company that is used to facilitate the NFT. Propy, as administrator, created a new limited liability company by filing articles of organization with the Delaware Secretary of State. The new entity was named “PNFT 003 LLC” and was in existence since March 14, 2022. Parrino then provided a copy of the articles of organization was provided to Gabrielle for her review.

After the successful filing and approval of the new limited liability company, the Propy executed, delivered and recorded a quit claim deed with the local county recorder’s office that granted the property to the recently formed limited liability company. This was the deed filed in March.

Propy, as administrator, minted the NFT, created a smart contract, and stored the paperwork on a decentralized storage platform accessible by NFT smart contract. Once the NFT was minted and the smart contract was established for the property, Propy listed the NFT for sale on the Propy Marketplace auction site. The property was available for auction with an interface on the Propy platform. It was also available on sites that had access to the Ethereum blockchain such as Etherscan or OpenSea.

“Do you understand the process?” asked Parrino.

“I understand how the document transferred on record to Propy, the title policy, the new limited liability and the deed transferred into the new entity. At the end of this process, I think that we will be buying the new limited liability company, and the deed will remain in the name of the entity, correct?” asked Gabrielle in search of confirmation.

“Yes, that is correct,” replied Parrino.

“I just do not quite understand this NFT, blockchain, smart contract part of the process. Where can I get a better explanation?” inquired Gabrielle.

“I understand, perhaps it would be better if I have you talk with a representative from Propy so that they can explain the technology part of this process,” offered Parrino.

“That would be great. I am interested in this property and now I am just as interested in this process. As a real estate agent, what is different about the work that you have to do to get this property ready for sale like this?” asked Gabrielle.

Parrino explained that the primary difference with this type of transaction is that the real estate agent had to do everything earlier in the process, but her commission structure was still the same as she had with traditional transactions. Title searches, deeding, and title policies were done prior to auction. Additionally, a home inspection and a market analysis were made available online to buyers and sellers on the auction platform.

Preparing the potential buyers was also a little different. Parrino had to have the buyers set up a MetaMask wallet. This was an account set up online that served as the money account used to purchase using the selected cryptocurrency. The MetaMask wallet was used because the auction site could immediately verify funds in the proper currency at the time of bidding. Parrino went on to explain that once a MetaMask wallet was established, Gabrielle had to acquire the cryptocurrency and have it placed in the MetaMask wallet. The cryptocurrency was supplied by an outside vendor. The cryptocurrency used for this transaction was USD Coin (“USDC”). It was a stable coin tethered to the value of the US dollar with very little variance. Parrino told Gabrielle that if she wanted to bid on the property in the following week, she would have to have the amount necessary to bid in the account prior to the auction.

Another important part of the cryptocurrency setup was that both Propy and MetaMask required that Gabrielle and Ryan provide some background information to verify their identities and that the funds used in the transaction were theirs. This was called the Know Your Customer (“KYC”) requirements, and they were used to satisfy the Anti-Money Laundering Act of 2020 (AML) (US Department of the Treasury, 2022).

“It seems like there are a lot of steps to the process,” said Gabrielle while wondering if this property acquisition was worth that amount of effort.

“Only on the first transaction. Once your MetaMask account and your verifications in Propy are done the first time, you would not need to repeat the process for future auctions,” stated Parrino.

Parrino provided the contact information of a Propy representative to Gabrielle. Additionally, Parrino told Gabrielle that she would be available through the completion of the auction and encouraged Gabrielle to reach out if she had any additional questions.

THE TECHNOLOGY COMPANY AND ITS PLATFORM

Gabrielle and Ryan were concerned about the legitimacy of Propy. They looked online to find information about Propy prior to contacting a representative. They were able to find information that provided background on this company.

According to their search, Propy, Inc. was founded in Palo Alto, California in 2016. The CEO, Natalia Karayaneva, had over 15 years of real estate industry experience and sought to simplify real estate transactions. The Propy website stated, “Propy is a real estate offer management and transaction platform that empowers buyers, sellers, their agents and deal partners to close real estate transactions entirely online” (Propy, 2022).

Gabrielle and Ryan, as real estate professionals, were aware that there were several companies that provided platforms with similar functions, so why was this company different? After several hours of online investigation, they concluded that the difference was the use of blockchain technology. The blockchain allowed for distinct private cryptographic keys, which was a long string of numbers which were used to validate blocks. This authentication, which is unique, timestamped, and traceable, provided authentication of proof of ownership. These numbers were represented on the deeds in the title search by the QR code and a Smart Contract Code on the documents. The authentication technology provided security for the transaction. These individual blockchain numbers and authentication tools allowed Propy to use smart contracts to manage their transactions. Propy designed the smart contracts, which were digitally programmed protocols on the blockchain. Smart contracts acted to fulfill the contract requirements instantly once conditions of a contract were met. This is often referred to as a “trustless transaction” as there is no need to verify the intention of the parties involved. Once the conditions were met, computer algorithms confirmed the transaction and acted in accordance with the terms of the smart contract. A human did not need to perform any additional analysis (Coinbase, 2022).

THE CONDOMINIUM ON THE AUCTION PLATFORM

As a part of the Gabrielle and Ryan’s online due diligence, they wanted to find the property on the Propy platform. The landing page included more information than they expected. The top of the page discussed the use of crypto currency, the ability to buy and sell houses as an NFT, and the use of Web3 technology which would have led one to believe that the company was primarily a technology company. There were links to courses that helped real estate agents become “crypto certified.” Scrolling down farther on this page, they saw links to real estate transaction management and title and escrow links that looked more like a company that was looking to provide software to title and escrow companies. Below those links, there were “featured properties”, including the subject property, with images and sales price that looked like what one would see on a real estate broker’s website.

Fortunately, Gabrielle found the condominium on the webpage and clicked on the link provided. Upon clicking that link, a page popped up that requested that Gabrielle sign up for access to the property. That pop up included a checkable box to get on an email list with news an additional checkable box to accept Propy’s privacy policy agreement. Gabrielle consented, received a confirmation email, and he was able to access information about the subject property on the Propy site.

In the Propy site, Gabrielle found a set-up that was similar to the interface that she found with Zillow.com and Realtor.com. There was a description of the property, pictures of the interior and exterior of the property, a link to a virtual tour, and a little more information concerning the monthly rental value of the area, the HOA fee and sewer, water, and trash information.

The site was also very specific in referencing the fact that this property was listed as “For sale via NFT” and that the currency to be accepted was going to be USDC. What this site had, that the Zillow and Realtor.com did not, was a large white box on the right side of the page that showed a countdown to the exact time of the auction of the property. The clock was steadily winding down.

The box also contained a line that stated “Minimum Offer \$185,000 USDC”. There was information directing the viewer to look for the “Proof of Authenticity” for the property transaction through Etherscan or on OpenSea. There was also a clickable blue box within this larger white box that stated “Connect Wallet”.

As Gabrielle scanned the page and found another link on the page that stated “Disclosures”. Upon clicking that link, Gabrielle found three documents enclosed.

First, there was a property report provided by the realtor, Parrino, which was a market breakdown that a seller normally received when setting a purchase price and contracting the property for listing. The property report contained several comparable sales in the area, a comparable sales estimate of \$230,000, a list price of \$185,000, a list of building features, neighborhood information, local schools and homeowners’ association dues and other items that provide information on the property to perspective bidders.

Second, there was a certificate of good standing for a limited liability company that was incorporated in January of 2022 and filed with the Delaware Secretary of State on March 14, 2022.

The last document contained in the disclosures was an 18-page home inspection report. This report, which was generated on December 28, 2021, looked at the condition of the property, the electric boxes and wiring, the plumbing including the water heater, the heating and cooling system, the fireplace, other mechanical equipment such as the oven, the refrigerator, the garbage disposal, the built-in microwave, the dishwasher, and the washer/dryer unit. There were only minor exceptions reported that were primarily due to the age of the property.

CONTACTING THE PROPY REPRESENTATIVE

On April 7, after their online crash course in NFT transactions, Gabrielle was ready to contact a representative from Propy as provided by Parrino. Gabrielle’s first question to the representative was, “Why are we doing this as an NFT?”

The representative stated that this is a proof-of-concept transaction. Propy wanted as simple a process as possible. Propy acquired this property in advance to limit any liability to a seller in the event that there were glitches in the process. This type of transaction required that there were no liens on the property and that all taxes were paid at the time of the transaction. Additionally, this property was sold at auction so that there was no financing involved.

As to why perform NFT transactions at all, the representative stated that the goal was to make future real estate transactions a fast and fully disclosed process. Once the auction was performed, the transaction was complete in about 15 minutes after Etherscan verified the transfer of funds. The representative said that if you can buy a car in an afternoon, why not buy a house

in about the same amount of time? Each parcel of real estate was a unique and readily identifiable. For NFT purposes, it was not much different than selling a piece of art, music, or trading cards.

The representative went on to explain that an NFT was just an online ledger of transactions that occur within the framework of a “smart” contract. All transactions that relate to the NFT were “blocks” that were designated by the long-string unique number. With each transaction, a new block was created by Propy. These blocks, when looked at as a whole as they applied to that NFT formed what was called a “blockchain.”

The receipts to the transaction were posted on a decentralized finance (“DeFi”) system. This meant that no matter where you were in the world, you were able to log into the blockchain system and account for all of the transactions that had taken place up to that point. All of the information was stored in the cloud. The representative pointed out that this system was more transparent and faster than the traditional centralized finance system such as a local bank within the US Federal Reserve system. A DeFi system did not have to wait for the approval of a third party that charged fees, like wiring charges or credit card fees, in order to process a transaction. The representative added that those who invested in NFTs and cryptocurrency were becoming comfortable with on-chain transactions. They liked the transactions because there was a documented trail for all transactions. The blockchain provides receipts for all parts included in the smart contract.

The representative went on to describe the remainder of the process to Gabrielle. The assumption was made that Gabrielle was signed up for the auction and had a MetaMask account with sufficient USDC to purchase the property.

If Gabrielle had the successful bid, Propy whitelisted the successful auction bid and linked Gabrielle’s Propy account with the MetaMask address. Then Gabrielle would have been verified by Propy through “Know Your Customer”/Anti Money Laundering process. The sale was authenticated, and the successful bid was posted on Etherscan and/or Open Sea. The funds were transferred immediately to the then former property owner and Propy pursuant to the smart contract.

Pursuant to the terms of the smart contract, Propy, in its administrator role and in the seller role, were able to receive royalties from subsequent bids and trades using this NFT on future transactions. That percentage was placed into the smart contract.

Gabrielle asked, “What is Etherscan and OpenSea?”

The representative stated that those were the online sites that showed the existence of the transactions on the Ethereum blockchain. If you visited one of those sites and entered the individual string of characters for a given part of the transaction, it would have shown you a record of the transaction. OpenSea, at opensea.io, was the largest market for NFTs. Etherscan, at etherscan.io, also provided a market for NFTs with the addition of data analytics. You could have found any transaction concerning that block chain, all documents, all money transferred, or any other action that caused the generation of a new string of numbers in the blockchain. These sites also served to verify that a currency was properly transferred which caused condition in a smart contract to be met. Once a condition was met in the smart contract, the smart contract was set to fulfill the remainder of the transaction. In the case of the subject transaction, that was to transfer the ownership of the limited liability company to the successful bidder. Gabrielle then turned her attention to the auction process. She asked, “Could you describe the process for the auction on April 12?”

The representative pointed out that the auction was held on the Propy auction site over a 24-hour period. One could have also tracked the bidding on OpenSea. During the auction, the highest bidder would have noticed the amount showed as having been removed from the MetaMask wallet. The representative assured Gabrielle not to worry about the reduction in the amount in the wallet during the auction as only the successful bidder would have had the bid amount removed at the end and all other bidders would have had their account fully restored at the end of the process. At the end of the auction period, if a bidder placed a bid in at the auction deadline, the countdown clock was reset for another fifteen minutes. At the conclusion of the auction, a successful bidder's MetaMask wallet was verified by Etherscan, the currency was exchanged to the seller's account along with any other party working on behalf of the seller pursuant to the smart contract, and the buyer would have had a receipt posted that showed the acquisition of NFT.

The representative also assured Gabrielle that Propy's involvement did not end at the end of the auction. To transfer the limited liability company to the new owner, Propy, as administrator, had to file a document with the State of Florida Division of Corporations, also known as Subiz.org. Propy had already filed a document for PNFT 0003 LLC as a Foreign Limited Liability Company on April 1, 2023. That document would have had to be amended with Sunbiz.org that showed the new officer, registered agent, and the principal address of the new company owner. Propy, as administrator also had to file a DR-430 "Change of Ownership or Control of Non-Homestead Property with the Hillsborough County Clerk of Courts."² This second document let the county know the responsible party for the county real estate taxes.

THE PRIOR SALE

Gabrielle was still looking for confirmation of the legitimacy of an NFT real estate transaction. She remembered that Parrino told her that this was going to be the second US property to be sold as an NFT. There must have been a first. A simple Google search provided several news articles concerning the first NFT real estate transaction. An article from the *Tampa Bay Times* provided the basics of the transaction (Berdychowski, 2022).

The property was also located in the Tampa area, in Gulfport, which was on the other side of Tampa Bay near St. Petersburg, Florida. The seller in that transaction was a local real estate investor and the founder of a blockchain company. According to the article, the seller wanted to answer the question, "Is this just hype or is there a real-world application? (The auction) is really to stimulate conversation." The seller went on to say that the idea behind minting property rights into an NFT would allow property to transfer quickly as a Venmo transaction. It would have accomplished this by putting ownership documents into a limited liability company, or LLC, and the NFT would have been the LLC (Berdychowski, 2022).

An article dated February 19, 2022 from *The Real Deal* shed additional light on this first US NFT transaction (Real Deal, 2022). The article stated that nearly 3,000 bidders signed up for the online auction and 50 of those bidders were officially verified as authenticated bidders. The auction had a minimum price of \$650,000 set and the successful bidder purchased the property for 210 Ethereum which translated to \$654,000. The article pointed out that the buyer did not

² §§193.1554, 193.1555 and 193.1556, Florida Statutes

actually buy the property but bought a company that owned the property called Never Forget to HODL LLC (Real Deal, 2022).³

Gabrielle searched the Pinellas County Clerk's website to find that the property had indeed been transferred into a company called Never Forget to HODL LLC in a quit claim deed that was recorded on December 28, 2021. The purchase consideration was listed as \$10.00 on the face of the document. Pinellas County Property Appraiser's site noted that the property transfer was listed as "unqualified". This meant that the deed transfer was not a bargained, arms-length sale. Gabrielle supposed that the sales price was not provided to the county as the property was merely transferred into Never Forget to HODL LLC and not sold to it.

A CALL FOR CRYPTOCURRENCY

On April 8, after a house walkthrough and a series of discussions between Gabrielle and Ryan, the couple decided that the house was too good to pass up. They wanted to participate in the auction. They believed that if they did not get the successful bid, they were no worse off than they were at the beginning of the process.

At this point, they knew that they needed to set up a MetaMask. They went online to metamask.io and set up an account in just a few minutes. They also contacted Propy and filled in the KYC information which allowed them to participate in the auction which was just 4 days away.

Gabrielle and Ryan determined that the property was worth up to \$235,000.00 to them. They just needed to convert that amount to USDC and place it into their MetaMask account. "Simple," they thought. Ryan had some familiarity with cryptocurrency and was under the belief that Coinbase was the place where people acquired cryptocurrency. While you could have bought cryptocurrency on Coinbase, Ryan was shocked at the cost. It cost a minimum of 1.5% plus a cost per transaction to acquire USDC on Coinbase. On a small transaction, that was not an issue, but on a \$235,000.00 transaction, that would have been over \$3,500. That money was not returned if the bid was unsuccessful. Ryan also found that the amount was too large for one transaction with Coinbase. Coinbase only allowed one wire transaction per day up to \$25,000. That meant that there would have been charges for ten wire transactions and there was not enough time to complete the transactions in time for the auction. Coinbase did not work for this transaction.

Ryan and Gabrielle contacted Parrino and the Propy representative to find a solution. The Propy representative directed Ryan and Gabrielle to a company called Altonomy. While discussing this option with the Propy representative, Ryan was looking at the website for Altonomy at altonomy.com, which appeared to be a legitimate site that discussed safety in asset protection and decreased risk-tolerance in relation to trading in NFTs. This seemed like a company that was involved cryptocurrency exchange. As time was of the essence, the Propy representative gave a phone number to Gabrielle that had a really odd area code. Understanding that 011 was used to call out of the country, she then wondered who had 65 country code. The answer was Singapore.

Due to the time difference between Florida and Singapore it took a day to set up a time to discuss the process to acquire cryptocurrency through Altonomy. Altonomy was an over-the-

³ HODL was a popular online cryptocurrency expression for those who buy a cryptocurrency and Hold on for Dear Life meaning that one should have held on to the investment regardless of currency volatility.

counter(“OTC”) cryptocurrency broker. A representative told Ryan and Gabrielle that for a charge of \$900, Altonomy would place \$235,000 in their MetaMask wallet.

Gabrielle asked, “How do we get the money into the account?”

The account representative stated that due to the time constraint, he could have the wiring information for Altonomy’s bank account emailed to Ryan and Gabrielle. It did not matter that the wire was on a Sunday, it would still have posted in time for the auction, the Altonomy representative assured them.

LAUNCH THE MISSILE OR ABORT THE MISSION?

As promised, wiring instructions were received in Gabrielle’s email. She was directed to the wiring page of a New York based bank. She had her bank information filled in the field form provided on the page. The wiring amount of \$235,000 was set up in the “Amount of Transfer” box. On another monitor, Gabrielle opened up the Propy site to look at the property that prompted this exploration into the world of real estate NFT transactions. She toggled back and forth between the two screens, but hesitated to send out the wire. Then Gabrielle looked to Ryan and asked, “Are we doing this?”



TEACHING NOTE

Research Methods

The primary information on this case was the result of personal interviews with the protagonists, the real estate agent mentioned in the case and a representative at the NFT minting company. The protagonists also shared documents that were incorporated into the case. Additional public information was obtained by the authors through publicly available information on the Hillsborough County Appraiser and Hillsborough County Tax Collector websites. Information concerning the prior sale was obtained through the same real estate agent mentioned in the case as well as secondary sourced news articles. Information concerning “Propy” and “Altonomy” was also found through the use of internet searches.

Learning Objectives

LO1: Explain how a non-fungible token (“NFT”) can be used to facilitate the transfer of real estate.

LO2: Compare a traditional real estate transaction and a real estate transaction using an NFT, smart contracts, and blockchain technology.

LO3: Assess the implementation of the use of NFT, smart contracts, and blockchain technology in this particular transaction.

Suggested Teaching Plan with Discussion Questions

Icebreaker Question: So, would you be willing to hit that button? Are you comfortable with this transaction?

This can lead to a discussion on risk aversion before getting into an overview of the case.

Provide an overview of the transaction. An instructor may call upon a student or students to provide a general overview of the property transaction.

Real Estate: Condominium unit in the Hyde Park area of Tampa Florida

Type of Sale: Auction

Minimum Bid: \$185,000.00

Seller: Propy

Prior Purchase: A few months before the sale for \$215,000.00

Buyer: Gabrielle and Ryan Channell

Purpose: Corporate Rental

Note: The Instructor may wish to describe a corporate rental. Corporations may house employees in short-term housing which may range from a few months to a couple of years. The corporations generally demand updated and upscale amenities for their employee living spaces. Corporations generally issue one all-in payment to the lessor. The lessor is responsible for all utilities and maintenance on that property and must be able to forecast their budgets to maintain a required margin to meet their expected cap rate.

Novelty: The property is being sold as a non-fungible token (“NFT”) and sold with the cryptocurrency USDC a dollar tethered stable coin.

DQ1: What is an NFT? (LO1 and LO2)

The instructor should lead a technical overview discussion of blockchain technology. This discussion should address blockchain technology and how it works, non-fungible tokens (“NFTs”), decentralized finance (“DeFi”), web3, smart contracts, protocols used for smart contracts. There should be a discussion on cryptocurrencies and the difference between stable coins like USDC and market driven valued currencies like Ethereum. A remaining point that should be made is that all transactions within this crypto world are maintained on websites such as Etherscan and OpenSea that work to post all transactions.

This question requires background information.

Suggested readings to familiarize the instructor on these matters would include the following:

1. Lantz, L., & Cawrey, D. (2020). *Mastering blockchain*. O'Reilly Media.
2. Solorio, K., Kanna, R., & Hoover, D. H. (2019). *Hands-on Smart Contract Development with Solidity and Ethereum: From Fundamentals to Deployment*. O'Reilly Media.
3. Terry, Q., & Fortnow, M. (2021). *The NFT Handbook: How to Create, Sell and Buy Non-fungible Tokens*. John Wiley & Sons.

DQ2: Why are real estate transactions a possibility for NFT transactions? (LO1 and LO2)

The instructor needs to point out why the unique, identifiable qualities of real estate allow it to be sold as an NFT. An analogy can be made to a work of art.

Non-fungible tokens (NFT) represent unique digital assets such as art, or any collectible. NFTs are unique and indivisible tokens. Real estate, by its very nature, is unique. No two units of real estate occupy the same space. Each tract has unique borders and characteristics. This process is already taking place with virtual real estate.

For example, Decentraland (<https://decentraland.org/>) is virtual reality (VR) platform built on the Ethereum blockchain. It allows users to own and trade virtual land, create, and monetize virtual experiences, and interact with others in the virtual world. Each parcel of land in Decentraland is an NFT, giving users full ownership and control over their virtual property. Another example of DApps, is Compound (<https://compound.finance/>). Compound is a decentralized lending and borrowing protocol on Ethereum. It enables users to lend out their cryptocurrency assets and earn interest or borrow assets by collateralizing their own crypto holdings. These contract features have attracted players from the financial world to build application for its industry. This virtual reality functions like reality with smart contracts providing the legal structure for that world.

DQ3: Can you describe the steps required for Propy to sell real estate as an NFT? (LO2)

The instructor should move to a discussion of the real estate NFT process that Propy provides. It is suggested that this discussion is performed as a chronological step exercise with participation from the students.

It is important that the students identify the process as described in the case. This is generally a good point to have students perform a shout-out. The instructor should be jotting down the points of the process and placing them in the order that the students provide. At the end of the shout-out, the instructor should compare the steps provided and the order to the list that is

prepared. An important point for this case is that this was a pilot test where Propy had acquired the property and placed it into the limited liability company. In future NFT transactions, a property owner would be required to deed directly to the limited liability company. With that assumption, the steps of the transaction listed chronologically, as noted through the case, should have been as follows:

1. The property owner contacted the real estate agent certified in cryptocurrency exchanges.
2. The property owner signed documents to authorize the real estate agent to list the house on MLS, to place the property in the Propy Marketplace, to authorize the type(s) of currency that the seller will accept, and the authorization to sell the property as an NFT.
3. The property owner, through the cryptocurrency certified real estate agent, hires Propy to NFT the property.
4. The real estate agent performs a market analysis with comparable property sales in the blockchain. (This step may occur at any point after listing and before the auction.)
5. The real estate agent, at the seller's expense, has inspections performed on the property and has the reports placed in the blockchain. (This step may occur at any point after listing and before the auction.)
6. The real estate agent may show the properties to potential bidders. (This step may occur at any point after listing and before the auction.)
7. Propy performed a title search, at the seller's expense, to verify that the property was owned by the property owner and verified that the property was "free and clear" of liens and that all property taxes were paid and current through the time of the proposed auction.
8. The Property owner signed NFT paperwork which includes authorization to Propy to serve as administrator of a limited liability company that is used to facilitate the NFT.
9. Propy, as administrator, created a new limited liability company by filing articles of organization with the Delaware Secretary of State.
10. After the successful filing and approval of the new limited liability company, the property owner executed, delivered and recorded a quit claim deed with the local county recorder's office that granted the property to the recently formed limited liability company.
11. A title policy, if one was required for the transaction, was issued in the name of the newly formed limited liability with the effective as of the time of the deed recording.
12. Propy, as administrator, minted the NFT and created a smart contract and stored the paperwork on a decentralized storage accessible by NFT smart contract.
13. Propy listed the NFT for sale on the Propy Marketplace auction site.
14. The bidder must be registered for the auction with Propy.
15. The bidder must have a MetaMask wallet with a sufficient amount of the proper currency to bid. (This step may occur at any point. The bidder may have had the MetaMask wallet with the proper currency prior to the listing of the property.).
16. An auction was held on the Propy Marketplace and is also registered on Etherscan and OpenSea.
17. Propy whitelisted the successful auction bidder and linked the name of the successful bidder with the wallet address.
18. The new successful bidder was verified by Propy through "Know Your Customer"/Anti money laundering process.

19. The sale was authenticated and the successful bid was posted on Etherscan and/or Open Sea.
20. The funds were transferred immediately to the then former property owner and Propy pursuant to the smart contract along with transfers to the real estate broker, all of whom would have had to establish a MetaMask wallet available to accept a USDC transfer.
21. Propy files documents with the secretary of state where the real estate is situated evidence a change in authorized members of the limited liability company and other organization documents are required by state and local law.
22. Pursuant to the terms of the smart contract, Propy and the original seller were able to receive royalties from subsequent bids and trades using this NFT on future transactions.

DQ4: How does the NFT process vary from the traditional real estate transaction process? (LO2 and LO3)

The instructor should lead a discussion comparing traditional transaction methods to the Propy NFT transaction model. Also lead the class in a discussion of the title issues/errors that were present in the transaction.

A Suggested textbook to familiarize the instructor on real estate transfer matters would include the following:

1. Bevans, N. R. (2022). *Real Estate and Property Law for Paralegals*. Aspen Publishing.

When comparing the NFT transaction to a traditional sales transaction, the instructor should try to keep the answers in chronological order, but this may be difficult to maintain during a shout-out session. This section may require a little more guidance where the instructor will ask about the given topic and the students will answer how that topic differs between the two processes.

- No purchase agreement is used (replaced by the smart contract).
 - a. These are trustless transactions - the offer, acceptance and consideration (earnest money) model is not used.
 - b. There are no inspection requirements.
 - c. There are no settlement fees to negotiate.
 - d. Property is sold “as is” with no property warranties outside of what is posted in the posting for the auction.
- The NFT process requires the formation of an intermediate entity.
 - a. This is generally the formation of a limited liability company.
- The deed is transferred prior to auction as a quit claim deed.
 - a. The property is deeded into the new limited liability company.
 - b. A quit claim deed does not have the warranties found in a general warranty deed.
- Title search is performed and owner’s title insurance is issued prior to the auction.
 - a. The effective date of the owner’s title insurance policy is brought down to the date of the deed recording.
- A home inspection is performed prior to the transaction at the seller’s expense and made visible to all parties prior to the auction.
 - a. The inspection aids the purchaser in making the decision to bid on the property without their own walk-through.

- i. Walk throughs are permitted and do occur on these transactions, but in a situation where one is not available for a walk-through, the inspection may satisfy the buyer.
 - ii. It may be suggested that a potential bidder contact the inspector to inquire about the purchase of a home warranty pursuant to the submitted inspection.
 - b. The inspection may be used to aid in the acquisition of insurance by the buyers
 - i. Special Note: Hazard insurance companies often require a four-point inspection by their own inspectors that includes a report on the roof, plumbing, electrical and HVAC systems).
- A market analysis with comparable sales is included and made visible to all parties prior to the auction.
 - a. Pricing transparency to all of the parties involved.
 - i. This is a potential gain in market efficiency as the property sales expectations are anchored in comparable sales prior to the auction.
- No settlement/closing or statement settlement statement used as it was replaced by the smart contract.
 - a. No tax prorations are performed.
 - i. This is a downside for the buyer in a place like Florida where taxes are paid in arrears. In this case, the transaction was occurred in 2022, but the most recent taxes were paid for the year 2021. The seller is technically responsible for the property through the date of property transfer, but they are no longer a part of the transaction at the time of the successful bid.
 - ii. An additional issue is that this property was owned by an individual who may have been living in the property as a homestead. The property was transferred into an LLC that does not have the ability to have a homestead property reduction. Therefore, the taxes for the next assessment will probably rise by the amount of the homestead tax deduction.
 - b. No additional settlement fees/closing costs are included at the end of the transaction.
- The purchaser buys a company that already owns the property.
 - a. No estoppel is required. The subject property was a condominium which would presumably have required condominium fees. An estoppel is generally performed by a board that collects fees for the condominium association to make sure that the fees of a prior owner are paid prior to the transfer of property. After the transfer, the condominium fees are the responsibility of the acquiring party. There is generally a fee charged by the condominium association to settle up the charges and to change the registration in their system with an acknowledgement of that change called an “estoppel letter”.
- A MetaMask wallet is required.
 - a. The bidders must also fill out Know Your Customer (“KYC”)/Anti-Money Laundering (“AML”) information to comply with US Treasury regulations.
 - b. The requisite amount of the proper cryptocurrency is required to bid.
- All bids are posted immediately on the Propy Marketplace as well as Etherscan and OpenSea.

- a. Once the funds are verified, all money is transferred immediately to the MetaMask wallets of the respective parties.
- All funds are verified immediately on Etherscan and OpenSea.
 - a. An important issue that arises with traditional auctions is that earnest money deposits may be surrendered, but the successful bidder can walk away prior to the fulfillment of the transaction.
 - b. There is no contract for the bidder to breach.
- Propy is required to file documents with the state and/or local jurisdictions that show the transfer of authorized parties from Propy to the successful bidder.

DQ5: Did you find any differences with the prior NFT transaction? (LO2 and LO3)

1. The property was deeded directly into the limited liability company, not to Propy. Propy bought the property in our transaction and then placed it into the limited liability company. It is suspected that the title insurance policy would have been in the name of the LLC and dated at the time of the quit claim deed.
2. The property was in a different county, but both were in the Tampa Bay area.
3. The currency used was Ethereum in the prior transaction, but USDC was used for the second transaction.
 - a. Why was USDC used in the second transaction? Less potential for currency fluctuation

DQ6: Why are they doing this? Perform a SWOT analysis of Propy's NFT transaction platform and discuss the viability of this model. (LO2 and LO3)

This is a simple exercise that allows the students to analyze the strengths, weaknesses, opportunities and threats of Propy and their new NFT business model. A preference again would be for a shout-out by the students with the instructor jotting down suggestions into four columns listed as "Strengths", "Weaknesses", "Opportunities" and Threats. The list provided in this Instructor's Manual is not exhaustive. These are merely suggestions for use in facilitating discussion. Students may provide answers that are novel, correct, and as interesting as any of the answers provided.

SWOT ANALYSIS**Strengths**

Speed of transaction
Trustless transaction - No reliance on promises, less opportunity for breach
Immediate verification of “good funds”
Expanded market for potential buyers/bidders
Transparency of the transaction
Building on prior expertise as a title platform
Coolness Niche

Weaknesses

New technology and technique - growing pains
Smart contract must be precise
Requires a massive education outreach
Requires trained real estate brokers/agents
Requires sophisticated buyers/bidders
Buyer/bidder must have MetaMask wallet with proper currency
- Potential liability - vouching for currency broker
Exposure to liability from seller
- Condition of the property
- Prior malfeasance of the seller
Exposure to cryptocurrency value fluctuations
Multiple jurisdictions require extensive research
Cost to maintain the operation

Opportunities
<p>Expansion of markets - beyond Tampa Bay</p> <p>Partnership with realtors</p> <p>Expansion of buyer/bidders beyond residential investors</p> <ul style="list-style-type: none"> - Commercial property - Multifamily properties - Owner occupied properties <p>Seller could transfer full real estate portfolio</p> <p>Seller could transfer a full business</p> <p>Partnership with lenders</p> <ul style="list-style-type: none"> - NFT financing could be privately funded - Diversity, Equity and Inclusion in homeownership <p>Work with local recording offices for records clarity</p>
Threats
<p>No barrier to entry - New technology could supplant</p> <p>Legislation varies among states</p> <ul style="list-style-type: none"> - could be unable to operate in given states - could be deemed illegal or made impractical in the future <p>Securities and Exchange Commission regulation</p> <ul style="list-style-type: none"> - may require registration as a broker of in the future <p>Cryptocurrency market could change/disappear</p> <p>Blockchain technology could change/become obsolete</p>

EPILOGUE

On April 10, 2023, Gabrielle and Ryan did hit the send button and the wire transfer from their account to the Altonomy account was launched. The information provided by Altonomy, Parrino and by a representative from Propy concerning the tethering of USDC to the US dollar and the lack of fluctuation in value when compared to other cryptocurrencies was the determining factor in their decision. Within two hours of sending the wire, \$235,000.00 worth of USDC appeared in their MetaMask account.

On April 12, at 12pm Eastern, the auction opened. The auction required a minimum bid of \$185,000. After a few hours, Gabrielle submitted the opening bid of \$188,000.00. The bidding posted on the Propy auction platform that showed her name associated a blockchain number. On April 13, with about an hour and a half remaining on the auction clock, someone else bid 200,000. With about thirty minutes remaining Gabrielle posted her final bid of \$215,000.00. The late bid added an extra thirty minutes to the auction clock, but the bid was successful. Gabrielle and Ryan bought the property.

Another interesting, and required item, which was addressed on April 12 was the correction of the deed into the correct limited liability name. A Corrective Quit Claim Deed was placed on record that noted a scrivener's error, changed the name of the recipient of the deed for

p0003 NFT LLC, a Delaware Limited Liability Company, to pNFT0003 LLC, a Delaware Limited Liability Company.

On or around April 21, 2022, Propy filed the Change of Ownership or Control Non-Homestead Property form with the Hillsborough County Clerk of Court to show that control of the company had transferred. On June 7, 2022, an amendment to the foreign limited liability company was filed to show Gabrielle Channell as an authorized person and member of PNFT 0003 LLC. The transaction was complete.

Gabrielle and Ryan have since remodeled the condominium and operate the unit as a corporate rental as intended. They are now crypto certified agents and advise others on the NFT real estate transfer process.



VIDEO REFERENCES

Podcasts are available online that have documented this transaction. It is suggested that these video links be provided to the students to hear this story directly from Gabrielle and Ryan Channell:

Propy. (2022, May 4). *Live! Propy Weekly Webinar Ep. 107: Meet the new Tampa condo NFT owners*. [Video file]. YouTube. <https://www.youtube.com/watch?v=O4JEjQae5ok>

The Crypto Reader. (2022, October 18). *Buying a home as an NFT (interview with Gabrielle Channell)*. [Video file]. YouTube. <https://www.youtube.com/watch?v=Jpx7qhgade8>

The Crypto Reader. (2022, December 5). *NFT home sale – Transactional benefits*. [Video file]. YouTube. <https://www.youtube.com/watch?v=-dGP-Rq4R94>

Propy maintains a video library on YouTube. A link to the library can be found below:

Propy. YouTube. <https://www.youtube.com/propy>

REFERENCES

Berdychowski, B. (2022, February 4). This Tampa Bay home is being sold as an NFT. *Tampa Bay Times*. <https://www.tampabay.com/news/real-estate/2022/02/04/this-tampa-bay-home-is-being-sold-as-an-nft/> Retrieved on May 30, 2022.

Bevans, N. R. (2022). *Real Estate and Property Law for Paralegals*. Aspen Publishing. Coinbase. <https://www.coinbase.com/price/propy#WhatIsPropyPRO>. Retrieved on May 30, 2022

Lantz, L., & Cawrey, D. (2020). *Mastering blockchain*. O'Reilly Media. Propy. <https://propy.com/browse/about/>. Retrieved on May 30, 2022

Real Deal South Florida, (2022, February 19). *Tampa-area home billed as first in US to be sold as an NFT*. <https://therealdeal.com/miami/2022/02/19/tampa-area-home-billed-as-first-in-us-to-be-sold-as-an-nft/> Retrieved on May 30, 2022.

Solorio, K., Kanna, R., & Hoover, D. H. (2019). *Hands-on Smart Contract Development with Solidity and Ethereum: From Fundamentals to Deployment*. O'Reilly Media.

Terry, Q., & Fortnow, M. (2021). *The NFT Handbook: How to Create, Sell and Buy Non-fungible Tokens*. John Wiley & Sons.

US Department of the Treasury, Financial Crimes Enforcement Network (FinCEN). *The Anti-Money Laundering Act of 2020*. <https://www.fincen.gov/anti-money-laundering-act-2020>. Retrieved June 30, 2022

STATUTE SECTIONS CITED

§201.02(1)(a), Florida Statutes

§193.1554, Florida Statutes

§193.1555, Florida Statutes

§193.1556, Florida Statutes