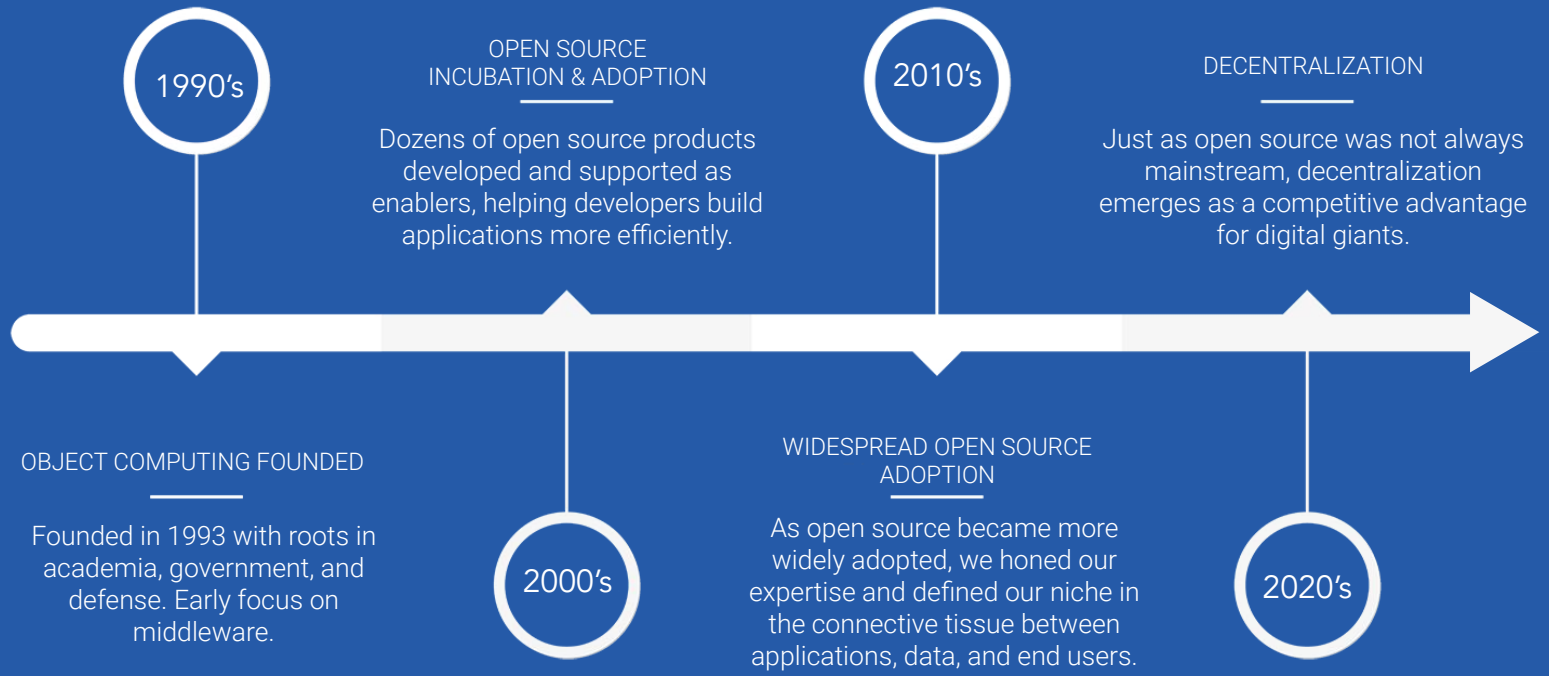
Say Hello to Object Computing, Inc

Premier Software Engineering Services

Our history



OCI by the numbers

OCI is …

A 26 year old software development consultancy with a bias towards open source, distributed systems using agile development techniques.

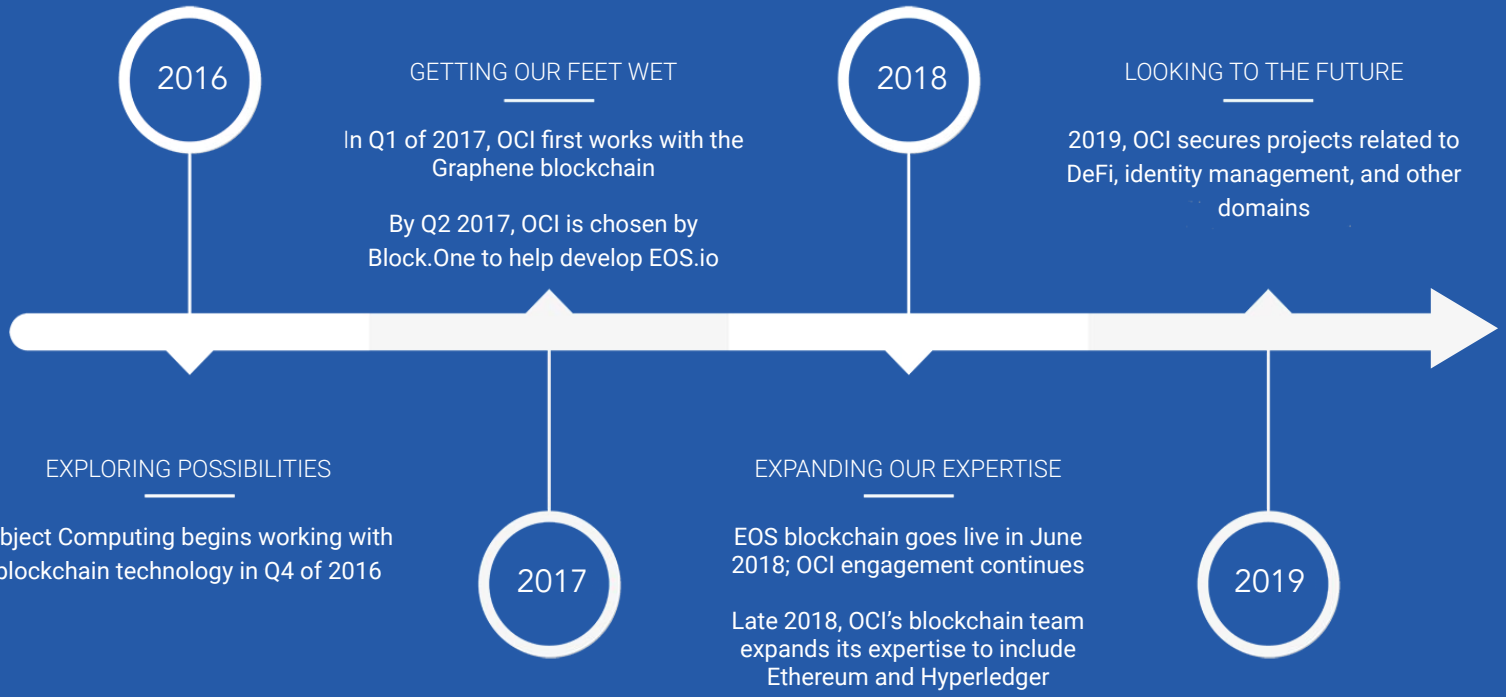
OCI is …

Roughly 200 software engineers, architects, PMs, marketing, sales, and misc management types.

OCI is …

Loosely split into 5 “Practices” or “Guilds” including blockchain of course, IIoT, AI/ML, microservices featuring Grails and Micronaut, and web and other front ends.

History of OCI's blockchain experience



Blockchain service offerings

STRATEGY & CONSULTING

Helping businesses discover how blockchain can offer a secure solution to complex business needs, and establishing plans for moving forward

ENGINEERING & INTEGRATION

End-to-end blockchain engineering services, implementation management, third-party integration, and custom development of smart contracts

TRAINING & PROTOTYPING

Technical leadership and training accompanied by rapid prototyping alongside our blockchain subject matter experts

BLOCKCHAIN & AI

Enhancing transformation by enabling analytics and decision-making from the data collected through blockchain

Blockchain Case Studies

- Ripe.io
- Block.one
- TradeStuff
- AirTM
- Opes.one

&

ripe.io
Blockchain of Food®

GRAPHENE

CASE STUDY

Ripe was Object Computing's first significant blockchain project. Based on the Graphene blockchain, the goal was to demonstrate the viability of a web of trust necessary of a blockchain of food.

The Objective

Show that it is possible to use a blockchain to manage evidence and verifications to validate assertions of declarations as truthful, AKA the web of trust..

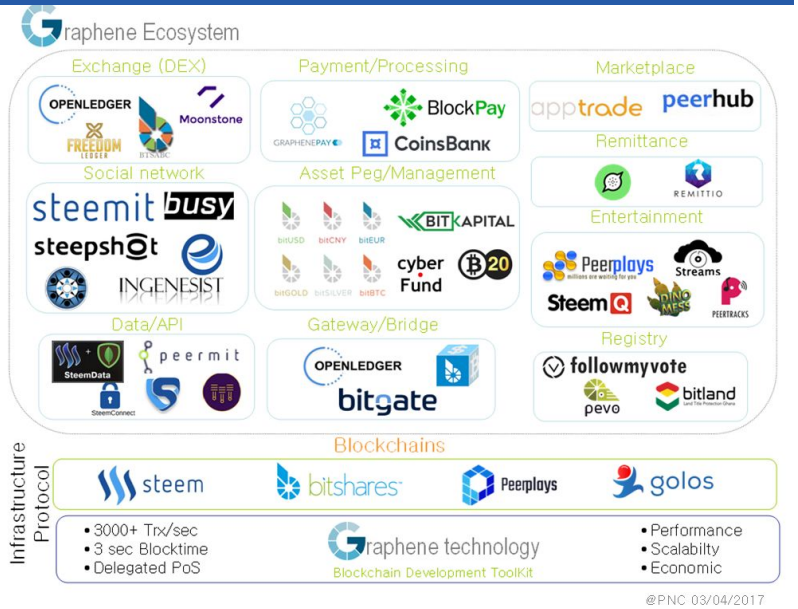
The Challenge

The CTO of Ripe came to Object Computing after a chance encounter at a conference. He brought to us a collection of use cases examining how farmers, transporters, sellers and producers could use the web of trust and the blockchain to demonstrate that, for instance, the ingredients of a salad were all locally produced.

The Solution

OCI and Ripe down-selected a couple of use cases to focus on for the POC, and selected Graphene as the blockchain. The OCI team prepared the necessary smart contracts and deployed a local testnet that Ripe was able to integrate with a simple mobile app to demonstrate the concept.

About Graphene



- 3rd generation blockchain design
- C++ smart contracts, integrated into node executables
- Delegated Proof Of Stake Consensus

& block.one

EOS

CASE STUDY

Object Computing Provides Technical Leadership to block.one, Supporting the Development of EOS.IO Blockchain Protocol

The Objective

Recognizing a need for a more secure and transparent world, block.one sought to develop a blockchain protocol that would …

- Scale to support mainstream development
- Support non-sequential throughput
- Reduce unsustainable transaction fees

The Challenge

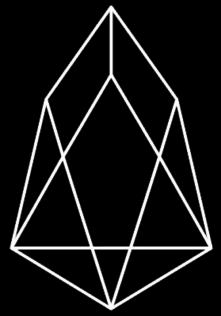
Blockchain technology was relatively young. Architectural patterns for such requirements did not exist, and therefore ...

- Critical skill sets required to develop such a solution were difficult to find

The Solution

block.one partnered with Object Computing to architect, develop, and test the EOS.IO software, from conception to release. block.one was incredibly pleased with the quality of OCI's performance and continues to engage Object Computing in the development of the EOSIO software.

& block.one



EOS

The Outcome

Today, **EOS.IO has scaled to over 10 million operations per day**, more than any other major public network and their aggregation.

Such scalability has pushed the boundaries of not only blockchain innovation, but also the tools that interface with blockchain transactions when processing such velocity and throughput.

This achievement highlights the vast utility and raw capability of EOS and the technical prowess of collective collaboration.

&

TradeStuff

CASE STUDY

Object Computing provided design and implementation expertise to assist with the creation of this EOS blockchain based trading platform

The Objective

Create a minimum viable product application that could be used to demonstrate viability and support further development.

The Challenge

TradeStuff was initiated early on in the lifecycle of the EOSIO blockchain development platform and so experience with the creation, integration, and deployment of blockchain components in the community was limited. TradeStuff needed experienced developers to help them achieve their goal as quickly as possible.

The Solution

TradeStuff came to OCI because we were the most experienced developers of blockchain application software for the EOSIO platform given our role as implementers of that platform. OCI was able to apply our design and implementation skills to help TradeStuff fulfill their objective. Visit Tradestuff.com to see the fruit of that effort.

About EOSIO

- The software behind the EOS blockchain.
- Open Source.
- C++ smart contracts run in a virtual machine and tied to individual accounts.
- Delegate POS consensus, similar to Graphene.

CASE STUDY

AIR.TM PARTNERS WITH OBJECT COMPUTING TO DEVELOP A DECENTRALIZED GLOBAL PAYMENT NETWORK

CASE STUDY

Object Computing Provides Technical Leadership to airtm, Supporting the Development of Stellar-based Blockchain Payment Network

The Objective

Recognizing a need for a more secure and transparent world, airtm sought to develop a payment network that would …

- Enable trades to a global decentralized marketplace
- Empower buyers and sellers with full transparency and trust, while remaining anonymous
- Not be dependent upon government currency

The Challenge

One of the problems with Bitcoin and the other electronic currencies is that they don't truly meet the grade to qualify as money. Cross-border anonymous transactions between any pair of currencies requires a unique skill set that was difficult to find.

The Solution

airtm partnered with Object Computing to architect, develop, and test the airtm payment network, from conception to release. We architected and developed this solution to meet the efficiency, resilience, and neutrality requirements necessary to deliver this pivotal market disruptor to users everywhere.

THE OUTCOME

1,129,691

airtm members

800+

banks & e-money networks

6,479,529

transactions completed

<10 min

average acceptance

Featured in Forbes Magazine

Forbes

Billionaires Innovation Leadership Money Business Small Business Life

Learn more >

3,972 views | Jan 14, 2019, 08:07am EST

Could A Cryptocurrency Service Help Save Venezuela?

Simon Constable Contributor

Investing

Author | Broadcaster | Journalist | Commentator | Speaker.

Venezuela's government can't seem to do anything right these days, so some enterprising folks have stepped forward to help the inflation-ravaged country.

Steve Hanke, hyperinflation expert, and professor of applied economics at Johns Hopkins University has teamed up with AirTM, a Mexico City-based blockchain-powered currency platform. Their goal is to get financial aid to beleaguered Venezuelans and they've named the project "AirdropVenezuela."

The initial target is to attract cryptocurrency donations totaling $1 million and then distribute the money to 100,000 people in Venezuela via the AirTM platform.

About Stellar

- Is a DAG (Directed Acyclic Graph) rather than a blockchain.
- Does not have a single global block log, rather logically partitioned logs each with its own validator sets.
- Supports any digital assets
- Focus on asset transfer, not general purpose contracts
- Create decentralized apps using Java, Python, Go and other languages
- Uses the Stellar Consensus Protocol to maintain data coherency

CASE STUDY

OPES

DIGITAL IDENTITY MANAGEMENT AT THE INTERSECTION OF BLOCKCHAIN AND ARTIFICIAL INTELLIGENCE

CASE STUDY

OPES

THE OPPORTUNITY

Each day, consumers create **2.5 quintillion** bytes of valuable data, while corporations monetize and profit from that data.

OPES sought to reinvent this model by allowing individuals to quantify and secure their digital behaviors, join online communities based on their interests, and earn branded rewards based on the shared value of that community's data. As each community gains users, its influence grows exponentially.

THE SOLUTION

Using biometrics, machine learning, and blockchain technologies, we architected and developed a mobile application that allows users to create a 'quantified self' and optionally consent to branded offers in exchange for access to all or some of their digital behavioral data.

Retailers and consumers mutually benefit from the exchange of highly engaged consumer data and branded offers.

OPES

The network is powered by a highly extensible cryptocurrency that is native to the OPES blockchain

Scalable cloud infrastructure that maintains immutable records

As the network scales, users rely on machine learning models to identify opportunities for mutually valuable trades

Biometrics contribute to financial services sector requirement to fulfill KYC due diligence and GDPR compliance

Global accessibility levels the playing field, creating equal opportunity in countries facing economic stress

Users are freed from centralized oversight, creating an ecosystem where decisions are driven by the people rather than the regulators

About Radix

- Is a DAG (Directed Acyclic Graph) rather than a blockchain like Stellar.
- The logical logs are physically sharded and dynamically interconnected via a ultra fast consensus protocol ‘Cerebus’.
- Sharding and Cerebus allow for scaling based upon demand.
- Ultra high throughput of 1M TPS in lab tests
- Radix dapps are built around various customizable asset types that allow for smart contracts like functionality.
- Innovation: Smart contracts composability with high throughput.

Anticipating the Future

Strategic blockchain partnerships:

- VeChain: Supply chain API platform backed by VeChainThor blockchain
- Mastercard: Integrated payments platform backed by proprietary DLT
- Intel: ICLP sensors package for supply chain
- Radix: High throughput DiFi focused DLT
- StrongBlock: Providing BaaS to enterprises

Blockchain evangelization efforts:

- IEEE P2145 blockchain governance standardization
- Cloud Security Alliance blockchain security model definition

Insights

- Blockchain enterprise adoption hobbled by privacy concerns. Enterprise requires privacy.
- Permissioned consortium chains meet immediate needs but have issues:
  - Siloed data.
  - High onboarding cost e.g. HyperLedger channels setup.
  - Require oracles for external view.
- We anticipate emerging privacy focused public chains to gain traction.
- We are excited about Zero Knowledge Proof and Multiparty Computation based solutions.

Additional Information

- EOS blockchain (https://eos.io)
  - Introduction to EOSIO Smart Contracts: https://www.youtube.com/watch?v=IWsPHZn29K4
  - Interwallet Operability: https://objectcomputing.com/case-studies/fio
- Graphene blockchain
  - Food supply-chain: https://objectcomputing.com/case-studies/blockchain-case-study-the-blockchain-of-food
  - General description: https://objectcomputing.com/resources/publications/sett/march-2017-graphene-an-open-source-blockchain
- Stellar blockchain (https://www.stellar.org)
  - Blockchain Success Story: Global Payment Networks Reimagined: https://www.youtube.com/watch?v=Ljw8yddfwDQ
- Hyperledger
  - What You Should Know about Hyperledger Before You Get Started: https://www.youtube.com/watch?v=j6BFGGZc58I
- Radix
  - Radix Blog: https://medium.com/@radixdlt
  - Performance Tests: https://www.radixdlt.com/post/test-method-part1/

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