



INTERBIT

Blockchain for
the Enterprise





This introductory paper aims to help demystify blockchain technology and describe how BTL Group's enterprise-grade blockchain development platform **Interbit**, supports the development of blockchain-based applications that satisfy the privacy, security, and scalability requirements that enterprises demand.

The expanding value of blockchain

Blockchain pilot projects continue to proliferate throughout a variety of industries, validating the technology's potential to drive business process innovation and automation. Concurrently, the visionary leaders who have implemented blockchain technology are discovering that they can dramatically streamline application development, and reduce IT infrastructure complexity. The expanding value of blockchain technology is being fueled by simultaneously enabling business process innovations and improving the efficiency of their creation.

Blockchain technology offers an elegant solution to a traditionally inefficient and time consuming (and thus expensive) business problem: **trusting the validity of important information that is created, shared, or managed by and among numerous parties.**

Interbit, BTL's platform for blockchain-based application development, was designed specifically for IT leaders and developers to bring the value of blockchain to their enterprises.

In a 2016 global IT budget study, Gartner reported a total worldwide IT spend of \$2.69 trillion, citing increasing efficiency and business process productivity through technology as the number 1 and 2 priorities respectively².

¹<https://www.cbinsights.com/research/industries-disrupted-blockchain/>

²<http://www.zdnet.com/article/it-budgets-2016-surveys-software-and-services/>

Demystifying Blockchain

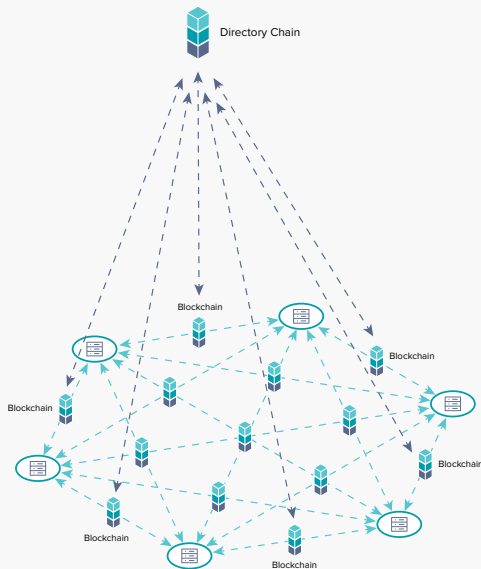
At its simplest, blockchain technology can be thought of as an ingenious new design for a distributed, shared and mutually trusted datastore. Blockchain allows multiple parties to collectively contribute to and manage a shared data set instead of managing their own versions in their own respective systems. Because of this, blockchain is radically transforming traditional shared data processes.

One of the technology's most powerful benefits to enterprises is: the data on a blockchain cannot be unilaterally tampered with or changed by anyone without the consensus of the other parties. As a result, blockchain-based systems both enable and build trust in shared digital environments. This is inspiring a wide range of innovations related to how businesses, departments, and individuals work together.

Deploying a blockchain solution within or among organizations can drive enormous efficiencies by reducing or eliminating the effort and costs of conventional processes in which multiple parties (or systems) interact or share a common data set. Such processes include but are not limited to the following:

- Data persistency
- System redundancy
- Data reconciliation
- Backups
- Workflows
- Disaster recovery
- Internal tamper-proofing
- Auditing
- Logging
- Privacy & Security
- Schema design
- Approvals/Finalizations

Blockchain empowers multiple parties to jointly manage data with built-in mechanisms that guarantee data validity and make the data records tamper-proof. This builds trust among the parties involved, eliminates the need for third party validators as well as the conventional systems, processes, and costs related to data backups, auditing, and reconciliation.





Interbit: A Blockchain Platform for the Enterprise

Interbit is a private blockchain development platform designed for business innovators and developers to quickly and easily incorporate the best of blockchain capabilities into enterprise applications. Simplicity, privacy, speed, and scalability – all critical enterprise requirements – are designed into the Interbit platform.

Simplicity

Unlike many other blockchain platforms, there is no need for developers to learn new programming languages, special tools, or even have deep knowledge of blockchain technology to quickly build blockchain-based applications when using Interbit.

Interbit was designed to be implemented with modern, proven and popular application design patterns and languages, namely Redux, Node.js, and React. The Interbit API has been kept to an absolute minimum footprint by following the Redux design pattern and Interbit powered applications are written in JavaScript.

This simplicity enables the efficient and elegant development of complex applications without concern for the underlying blockchain technology functions. Application developers with Redux experience will find developing on Interbit very intuitive.

Privacy

A common challenge with blockchain technology is the potential for the inadvertent sharing of sensitive data (sometimes called metadata leakage) among parties on the same chain. For most enterprises, this must be solved before any blockchain-based solution can be implemented.

In addition to its secure cryptographic functions, Interbit's design addresses privacy challenges by providing the ability to easily create private chains for specific network participants, connecting these chains into a many-chain network, and controlling what data remains on the private chains and what data is shared with the broader network. Because of this design, parties can maintain sensitive information on a private chain between them while sharing and gaining the benefits of non-private data from all network parties via a permissioned

chain. This mixture of connected chains solves a wide range of competitive, legal, and regulatory challenges. For example, an industry-wide chain could include a regulator for disclosure purposes, while a number of connected private chains keeps the more competitively sensitive information confidential between the appropriate counterparties.

Speed & Scalability

A typical problem that blockchain solutions face is that they slow down as they scale. There is an inverse relationship between the number of nodes on a blockchain and the transactional throughput of that blockchain. The massively decentralized Bitcoin blockchain, for instance, can perform 7 transactions per second for small transactions and only 3 per second for more complex transactions. The speed and scalability benchmarks of today's enterprise systems require hundreds to thousands of transactions per second.

Interbit solves the blockchain scalability problem in the same way it solves privacy: through the creation of an unlimited number of connected blockchains. By adding blockchains, work is distributed across the different blockchains rather than by increasing the computing power per node on a single blockchain. This approach creates a system that truly scales. The total throughput of an Interbit powered network is the sum of the throughput of all the private blockchains, and there is no limit on the number of private blockchains that can be created.

Need more detail?

If you are a developer, blockchain technical evaluator, or business leader, and wish to learn more about Interbit as a solution for your organization, please visit www.interbit.io

Blockchain Use in Industry Today



Finance

Interbank and international payments; trading; identity management; loyalty rewards management



Energy

Trade reconciliation; supply chain management; commodity trading; cybersecurity



Insurance

Fraud detection; claims handling; risk profiling; automated underwriting; customer onboarding



Supply chain management

Product traceability; anti-counterfeiting; cybersecurity; smart tendering; inventory management



Government

Fraud detection; data interoperability; document digitization (e.g. digital land titles)



Legal

Intellectual property rights management; land registry and deed management



Healthcare

Data interoperability; cybersecurity



About BTL

(Blockchain Technology Limited)

TSXV:BTL

Founded in 2015, BTL operates from both Canada and the UK.

BTL has created an enterprise-grade private blockchain development platform called Interbit. Created by developers for developers, Interbit's goal is to become the professional-grade blockchain development tool of choice for visionary IT leaders, Solution Architects, Application Designers and Developers. The Interbit platform includes a suite of APIs and smart contracts that allow enterprise application developers to rapidly, confidently, and efficiently create enterprise-grade applications.

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