HYPERLEDGER
BLOCKCHAIN TECHNOLOGIES FOR BUSINESS

# Turbo:
# An Introduction

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## ABSTRACT

A token based distributed framework that powers artificially intelligent systems' Deep learning, payment and transactional capabilities.

## INTRODUCTION

Artificial Intelligence has evolved over many years, and the adoption of Artificial Intelligence based systems is still growing at a slower pace across various Industries.

However, due to the fragmented nature of the AI researches that happen, the systems with machine learning capabilities haven't reached their full potential yet. Now, this is about to change.

The Token based Artificial Intelligence Distributed Machine network as we know it, aims to overcome the hurdle by sharing its intelligence through Interledger protocols thereby powering some of the futuristic applications using Enterprise-grade fault tolerant distributed ledger technology as it's foundation.

## Key features:

The Token based Artificially Intelligent Distributed Machine Network has these advantages, which makes it one of the well designed AI platforms.

- Based on Hyperledger blockchain
- Build Artificial Intelligence powered applications
- Faster Cognition and Learning by AI
- Payments from Machine to businesses
- Automatic and speedier insurance settlement
- Token based reward system
- Token storage (wallets)
- Connected Intelligence Network
- Interledger protocol
- Based on Fault Tolerant Distributed Consensus systems
- Hyperledger logs
- Faster transaction rate, based on Hyperledger's native transactional bandwidth.
- Secure permissioned blockchain network.

## What is a Token?

In the present context, a token is a digital currency that is generated as a reward for each decisions made or a transaction verified.

## What is Token backed Artificially Intelligent Distributed Machine Network?

Token Based Artificially Intelligent Distributed Machine Network is a distributed network of Artificially Intelligent systems that continually learn together over a connected network and make decisions based on a common consensus. For every valid consensus, a token is awarded to the participating systems.

The problems, scenarios and decisions arrived are stored across the entire network, so newer systems can just plug into the network and automatically be aware of the scenarios.

The other aspect of TAIDMN is the seamless token based payments feature it offers among the different systems that are present within the network.

The platform is also known as HYPERLEDGER **TURBO**

## What are the technologies that back Hyperledger TURBO?

Hyperledger TURBO uses some of the best innovations in Computer vision, Web and Hyperledger technologies to run it's core platform.

- **Hyperledger technology**
- **Interledger Protocol**
- **Computer Vision**
- **Nodejs**
- **BIGML**
- **Google's Protocol buffers**
- **Hyperledger Caliper ( For reports generation over hyperledger)**
- **Hyperledger Composer (on the fly smart contract generation by AI systems)**
- **SOLIDITY**
- **HLTURBO DIST (Redundancy logger)**
- **HLTURBO PAY (Token storage )**
- **MLX LOGIC (Logic verifier built for the Hyperledger Turbo Platoform)**

## AI + HYPERLEDGER = HYPERLEDGER TURBO

The concept of HyperLedger Turbo was born out of the necessity to bring in an Token based AI Ecosystem across different business sectors, right from manufacturing, supply chain management to Driverless Vehicles.

The AI backed system is capable of creating smart contracts on its own, thereby enabling transactions between smart client nodes and the AI based systems connected to the network.

Interledger protocol would allow the system to connect with any ledger based technology or any other AI system to ensure compatibility and any Smart business applications can be built over it.

To give you an example in a real world Near future scenario, Imagine a driverless vehicle that is built on and connected to the HYPERLEDGER TURBO uses the network to learn newer scenarios at identifying more objects, accident patterns, resolution decision etc, and then in turn commits back to the network vital information of any unknown or newer patterns that it encounters, this can help train the other Artificially Intelligent Vehicles connected to the network and prevent or expect the scenario well ahead.

For example, this could be a crucial accident data with inputs from the Onboard diagnostic device and other sensors can push it back for analysis by other AI systems and come up with methods to avert it.

HYPERLEDGER TURBO being a Token based system would generate tokens as a reward for Machines that participate in decision making, contributing to the network and for verifying transactions.

Tokens generated by the AI systems are stored in a crypto wallet built specifically for the platform.

## USE CASES OF HYPERLEDGER TURBO

The concept of HyperLedger Turbo was born out of the necessity of bringing in a Token based AI Ecosystem across different business sectors, right from Driverless Vehicles to manufacturing and supply chain management.

### DRIVERLESS VEHICLE RENTAL / Ride sharing platform

A major industry that Hyperledger Turbo would disrupt is the Vehicle rental industry. Driverless Vehicles are getting smarter and can change how people commute or travel.

Still in its early stages, Vehicle rental companies are toying with the idea of deploying driverless vehicles among their fleet as a pilot method to see how they perform.

Customers who are using the Rentals / ride sharing platform could choose to pay using the tokens which could be purchased through an Exchange or an issuer.

### DRIVERLESS VEHICLE SERVICE & MAINTENANCE INDUSTRY

Vehicle service and maintenance is a perennial industry, any machinery that is in use for over a period of time would need to be checked and maintained from time to time. A truly autonomous vehicle should be empowered to analyse and diagnose any fault it has and then get it self serviced at compatible service stations. A smart contract would be created on the fly based on the parameters the system defines and once the service is completed, the conditions on the contract are met the payment is made in the form of the Token.

All the participating service stations would be equipped with terminals to communicate with the Vehicle. The service centres could choose to have robotic assembly chain to carry out the maintenance. In such a case, the service scenarios are also recorded on the network for auto training newer units in the assembly line.

## MODERN SUPPLY CHAIN & RETAIL

Hyperledger Turbo backed Modern supply chain & retail channels could
enable early stage businesses that rely on finding cheaper and quality products to source from anywhere on the planet.

Artificially Intelligent connected systems could understand the type of product in an inventory, the parameters involved such as the temperature, validity, maximum distance to the ware house etc and chalk out strategies to procure them.

It would also analyse and predict the status of the inventory real world aware accuracy.

Hyperledger Turbo would also level the play field for newer businesses by forming a borderless marketplace by connecting B2B buyers and sellers.

## CONCLUSION

Hyperledger Turbo is the Artificially Intelligent Enterprise-grade platform of the future. Modularly designed to accomodate and transact with other real world objects. Hyperledger Turbo was built to add a layer of Artificial Intelligence to every industry that it touches upon.