Dan O'Prey - Hyperledger Marketing Committee Chair

Chief Marketing Officer at Digital Asset

Twitter: @danoprey

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Tracy Kuhrt - Community Architect

20+ years of software engineering and architecture experience

- The Linux Foundation
- PayPal
- Microchip Technologies

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HYPERLEDGER
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Agenda

1 **Introduction to Hyperledger: Blockchain Technologies for Business**

2 What's the big deal with business blockchain anyway?

3 Unique features of Hyperledger Fabric and Hyperledger Sawtooth

4 Get involved!

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The Linux Foundation is Much More than Linux

Security
We are helping global privacy and security through a program to encrypt the entire internet.

Networking
We are creating ecosystems around networking to improve agility in the evolving software-defined datacenter.

Cloud
We are creating a portability layer for the cloud, driving de facto standards and developing the orchestration layer for all clouds.

Automotive
We are creating the platform for infotainment in the auto industry that can be expanded into instrument clusters and telematics systems.

Blockchain
We are creating a permanent, secure distributed ledger that makes it easier to create cost-efficient, decentralized business networks.

Web
We are providing the application development framework for next generation web, mobile, serverless, and IoT applications.

We are regularly adding projects; for the most up-to-date listing of all projects visit tlfprojects.org

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Introducing Hyperledger

Open source collaborative effort to advance cross-industry **blockchain technologies**

Hosted by **The Linux Foundation,** fastest-growing project in LF history

Global collaboration spanning finance, banking, IoT, supply chains, manufacturing and technology

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Hyperledger Modular Umbrella Approach

Infrastructure
Technical, Legal, Marketing, Organizational

Ecosystems that accelerate open development and commercial adoption

THE **LINUX** FOUNDATION

Cloud Foundry	Node.js	**Hyperledger**	Open Container Initiative

Frameworks

Meaningfully differentiated approaches to business blockchain frameworks developed by a growing community of communities

Hyperledger **Fabric**	Hyperledger **Sawtooth**	Hyperledger **Iroha**	Hyperledger **Indy**	Hyperledger **Burrow**

Tools

Typically built for one framework, and through common license and community of communities approach, ported to other frameworks

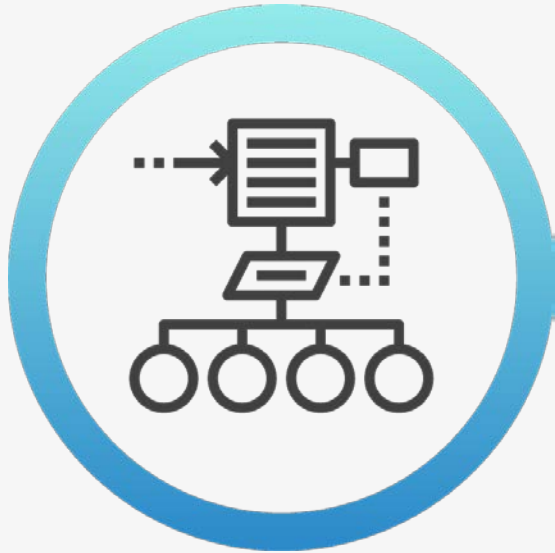| Hyperledger **Composer**	Hyperledger **Cello**	Hyperledger **Explorer**	Hyperledger **Quilt**

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7

What is a Distributed Ledger?

An append-only system of record or log of transactions.

What is a Smart Contract?

The code or any complex program stored and executed on a blockchain.

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Myth Debunked: Blockchain ≠ Cryptocurrency

Cryptocurrency is an application that sits on top of blockchain. Not the other way around.

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Why Business Blockchain Technologies

All over the global market there are ledgers that organizations and individuals alike must trust.

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Cross-Border Payments

The Challenge	Current system is slow, expensive, bureaucratic and error prone
The Collaboration	Global team from ANZ, BNP Paribas, BNY Mellon, SWIFT and Wells Fargo
The Technology	Hyperledger Fabric supports requirements of governance, data privacy, standardization, and identity. Real-time visibility of accounts eases reconciliation, delivering liquidity savings

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Read about the POC in Coindesk.

Hear about the collaboration in the ANZ Community Spotlight video.

Healthcare Records

The Challenge	Records and data often spread across multiple institutions, hampering access
The Collaboration	Hundreds of companies in Hyperledger Healthcare Working Group collaborate on how to best apply blockchain
The Technology	Hyperledger Composer offers APIs, a modeling language and programming model to define and deploy business blockchain networks quickly. A healthcare wallet can empower patients and caregivers to control access to records.

Join the Hyperledger Healthcare Working Group (HLHC) to help bring commercial blockchain adoption to the healthcare industry.

CHANGE HEALTHCARE

Gem

HASHED HEALTH
HEALTHCARE BLOCKCHAIN INNOVATION

KAISER PERMANENTE

patientory

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Digital Identity

The Challenge	In 2017 only 44% of Filipinos used bank accounts, a figure suppressed by inefficient identity systems
The Collaboration	Bankers Association of the Philippines, Hyperledger member Amihan and several banks, including AUB, BPI and Citibank
The Technology	Proof-of-concept implements self-sovereign identity with Hyperledger Indy. Consumers enter information once in a privacy-preserving way, and re-use that data to open new accounts. Banks can trust the data

HYPERLEDGER INDY

AMIHAN

*Read more about the Amihan use case for the Hyperledger Indy framework in *The Manila Times.*

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New in Hyperledger Fabric v1.1

- Node JS Chaincode ([FAB-2331- Node.js Chaincode](#))
- Encryption Library ([FAB-830 - Encryption library](#))
- Attribute Based Access Control ([FAB-5346 - Attribute-based Access Control](#))
- Performance Improvements ([FAB-6421 - Performance improvements](#))

Experimental Features (only available if you build from source):

- Java Chaincode ([FAB-1973 Java Chaincode](#))
- Resource Based Access Control ([FAB-3621 Resource based ACL](#))
- Private Channel Data ([FAB-1151 Private channel data (aka Side DB)](#))

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Hyperledger Sawtooth v1.0 Features

- Un-Pluggable consensus (Change consensus on the fly by transaction)
- Proof of Elapsed Time (PoET) consensus
- Write smart contracts in almost any language
- Ethereum contract support via Hyperledger Burrow integration
- Supply Chain example out of the box
- Parallel transaction execution for added throughput

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Free Introduction to Hyperledger Course

https://www.edx.org/course/blockchain-business-introduction-linuxfoundationx-lfs171x

How you can get involved

Subscribe to Hyperledger Mailing Lists

Attend Hyperledger Hackfests and upcoming blockchain events

Get the **latest development updates** from the wiki

Engage in the discussion on **Rocket.Chat**

Search for Open Bugs, or Report a New One, in Our Bug Database

Start or join a local Hyperledger **Meetup**

Participate in the Working Group meetings

Check out all the Hyperledger business blockchain technologies and **download our codebases**

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