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FEBRUARY 14-16, 2017 | LAKE TAHOE, CA

# State of Blockchain at LF

Christopher Ferris, CTO Open Technology, IBM



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# Blockchain and Distributed Ledgers

Blockchain allows multiple competing parties to securely interact with the same universal source of truth



## Finance

Streamlined settlement, improved liquidity, increased transparency and new products/markets



## Healthcare

Unite disparate processes, increase data flow, reduce costs and improve patient outcomes



## Supply Chain

Track parts and service provenance, ensure authenticity of goods, block counterfeits, reduce conflicts



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# Pre-existing Blockchain Technologies

Limited  
Throughput

Slow  
Transaction  
Confirmations

Designed for  
Cryptocurrency

Poor  
Governance

No Privacy

Anonymous  
Processors

No Settlement  
Finality





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# Perfect for open source

New, potentially revolutionary technology

Requiring multiple specialist skills to develop

Used by multiple parties

Controlled and monetized by no one

Strong governance model





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# 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 Goals



**Create enterprise grade,  
open source, distributed  
ledger frameworks &  
code bases**

to support business  
transactions



**Provide neutral, open, &  
community-driven  
infrastructures**

supported by technical  
and business governance



**Build technical  
communities**

to develop blockchain  
and shared ledger  
POCs, use cases, field  
trials and deployments



**Educate  
the public**

about the market  
opportunity for  
blockchain technology



**Promote our  
community of  
communities**

taking a toolkit  
approach with many  
platforms and  
frameworks



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# Modular Umbrella Approach

## Infrastructure Technical, Legal, Marketing, Organizational

Ecosystems that accelerate  
open development and  
commercial adoption

CloudFoundry

Node.js

Hyperledger

Open Container  
Initiative



## Frameworks

Meaningfully differentiated approaches to business  
blockchain frameworks developed by a growing  
community of communities from the entire industry

Fabric

Iroha

Sawtooth

## Modules

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

Chaintool

Explorer

Cello





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# Hyperledger Leadership



Brian Behlendorf  
Exec Director



Blythe Masters  
Digital Assets  
Board Chair



Chris Ferris  
IBM  
TSC Chair



Dan O'Prey  
Digital Assets  
Mktg Cte Chair



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# Premier Members

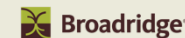






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# General Members







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# General Members (con't)





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# Associate Members





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# Hyperledger Effect

THE WALL STREET JOURNAL.

[How Blockchain  
Will Save Your Life](#)



CoinDesk

[Hyperledger's Next Act:  
A Blockchain Bridge to China](#)

THE NEW STACK

[Blockchain Hyperledger  
Project Generates Interest  
in the Enterprise](#)

600+

Average month-over-month Global Press Articles Covering Hyperledger in 2016

MIT Technology Review

[Web Pioneer Tries to Incubate  
a Second Digital Revolution](#)

3

Major Code Bases

149

Active Contributors

110+

Members (20+ in China)

“Hyperledger’s focus has always been on the development of core blockchain technologies such as Hyperledger Fabric and other products built by the community.”



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+270% membership growth





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# 5 top-level projects



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149 contributors







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# Diverse Technical Leadership



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6553 commits





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5,400 Slackers



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5,400 ~~Slack~~ users

RocketChat



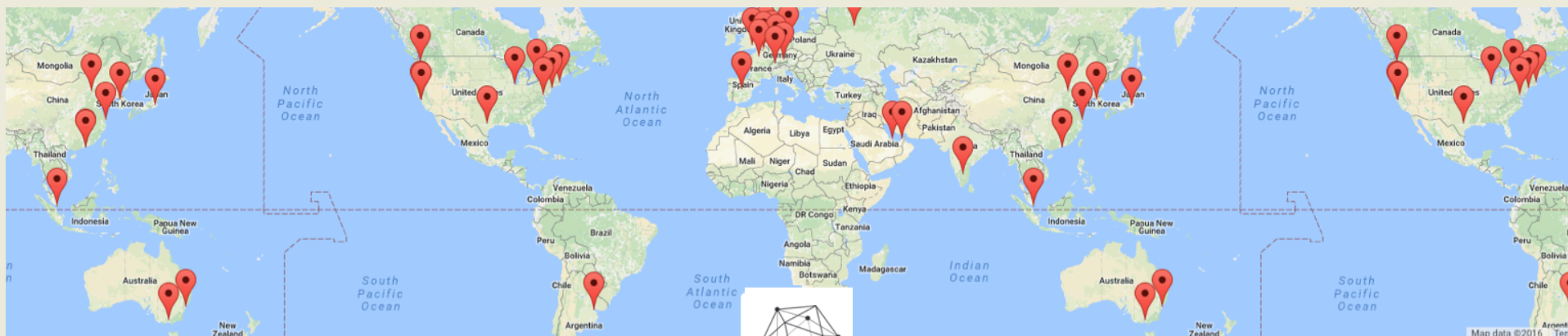
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# 9 Working Groups



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# Global Meetup Community



We are **8,600+** members across **38** Meetups







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# 8 Bi-monthly F2Fs







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# Member Summit





# Five top-level projects

- Sawtooth Lake – DLT written in Python with potential from IoT to Financials. Support for both permissioned and permissionless deployments. PoET consensus
- Iroha – a simple, decentralized ledger with mobile clients
- Fabric – a foundation for blockchain applications with a modular architecture that allows components, such as consensus, messaging, identity, and encryption services to be plug-and-play.
- Cello – orchestration for delivering blockchain as a service
- Blockchain Explorer – a UI for exploring the state of the ledger



# Sawtooth Lake Highlights

- Published a stable release in January
- Adding new Transaction Families
- Enriched Proof of Elapsed Time (PoET) to help realize a spectrum of public to private policies.
- Working on enhanced performance (e.g. from different threading techniques) and multi-language support for smart contracts.





# Iroha Highlights

- Improving the set up experience by using Docker Swarm.
- Improving network stability and also replace our method of data storage to improve performance and simplify the codebase.
- Aligning APIs with the Hyperledger Fabric project to enable greater interoperability.



# Fabric Highlights

- Published stable v0.6 release
  - Stable set of features for POCs and pilots
  - Enable developers to be up in running in minutes
- Feedback from pilots across multiple domains driving v1.0 architecture
- Increasing contribution diversity
- Production deployment – IBM Global Finance
- Driving towards v1.0 release (real soon now)





# Consolidation begins?

- A number of cross-project collaborations are beginning
- PoET integration with Fabric
- Iroha collaboration with Fabric
- Blockchain Explorer taking on additional back-ends
- Cello support for multiple platforms



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# Join Us!

Ensure the strength and longevity of a core technology to your business.

Publicly proclaim your leadership in the blockchain space.

Work with other blockchain leaders to develop and promote Hyperledger.

Visit [hyperledger.org/about/join](https://hyperledger.org/about/join)  
or email [info@hyperledger.org](mailto:info@hyperledger.org).



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