Blockchains for Real Estate

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BIGCHAINDB

IPDB

INTERPLANETARY DATABASE


r/btc
MAGIC
Internet
money
Join us

Blockchain: A Special “Spreadsheet in the Sky”

What’s special:

- no one owns it
- anyone can add to it
- no one can delete from it

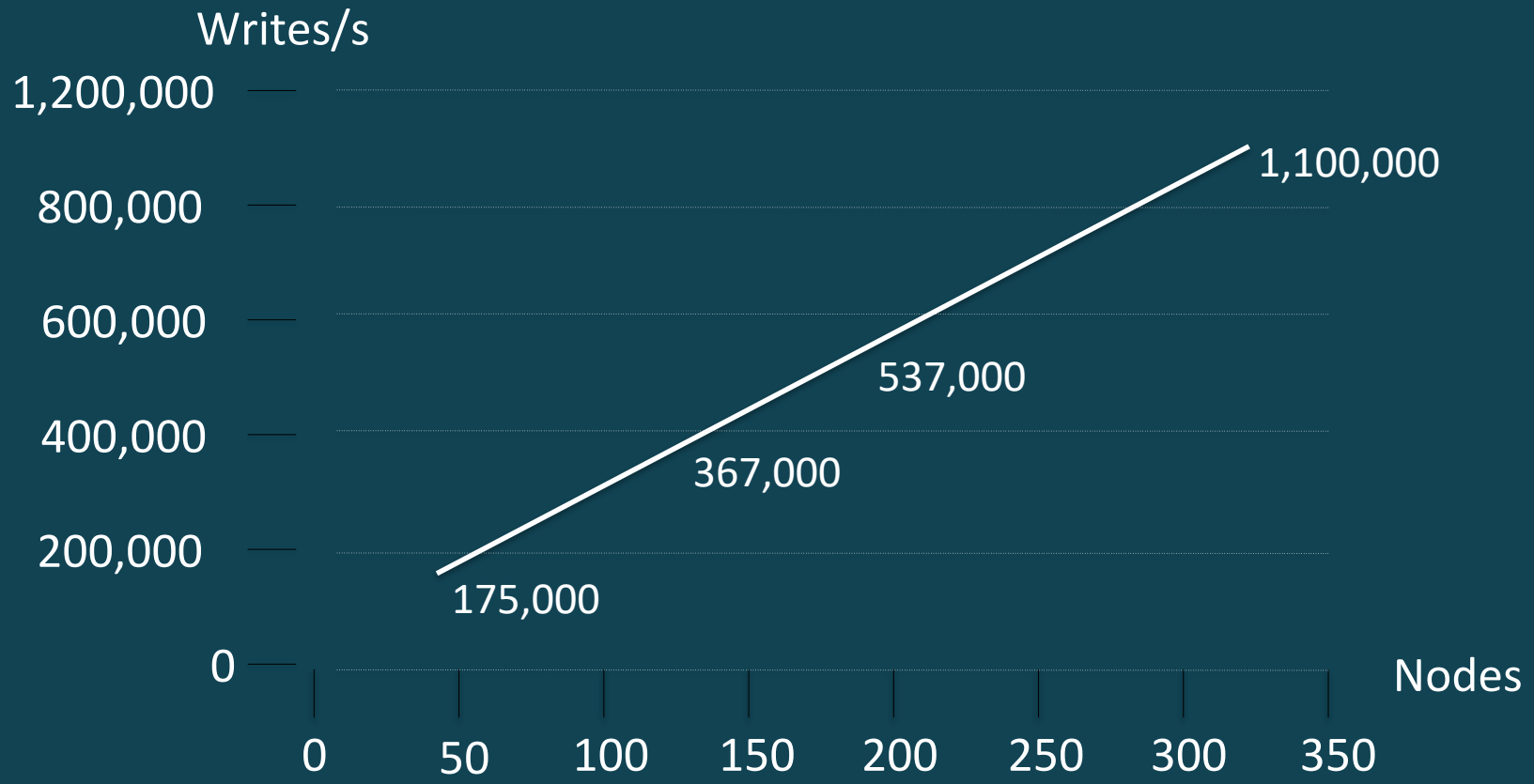
- Writing to a blockchain is like etching in stone.
- Which allows us to issue assets, and transfer them


Traditional blockchain issues
Can’t get to “internet scale”
Hard to query through mountains of data
Let’s fix this...

Everyone Uses Databases
Example: MongoDB select customers

Traditional databases get to “internet scale”:

How: Distribute storage across many machines. Example: Cassandra



Blockchains are really *databases* with “blue ocean” benefits

Decentralized / shared control

Immutability / audit trail

Assets / tokens / code

How to build a blockchain database (BigchainDB)

1. Start with a traditional distributed database (e.g. MongoDB)
2. Engineer in blockchain characteristics (decentralized, immutable, assets)

Let's make a **shared, planetary** database!

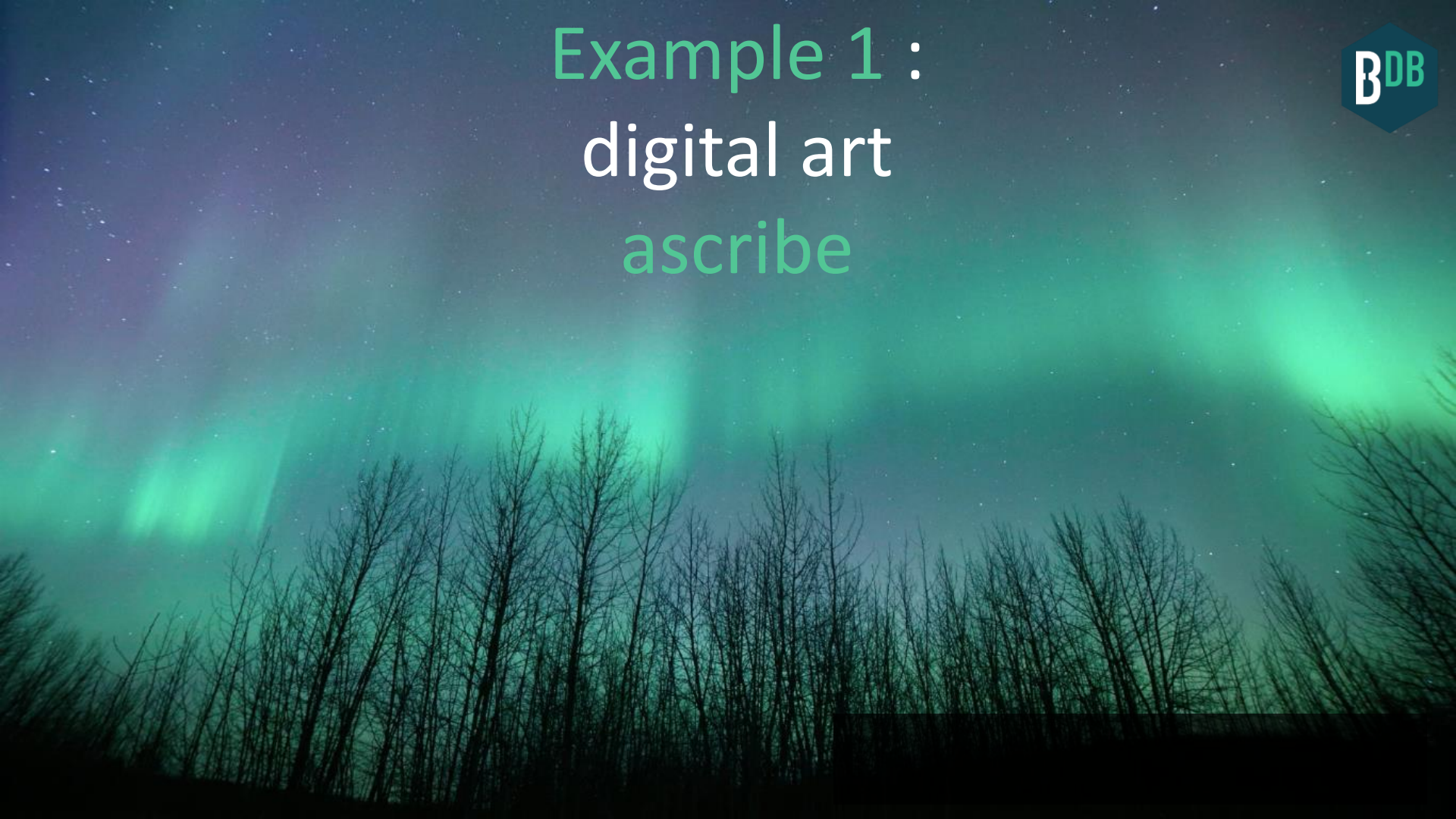
1. **Blockchain Database Software**

BIGCHAINDB

2. **Network** running the sw, w/ thoughtful **governance**

IPDB
INTERPLANETARY DATABASE


Applications


Example 1 :
digital art
ascribe

the scenery made most people ignore each other


ascribe®
for Artists & Creators
SIGN IN / SIGN UP
ascribe is a fundamentally new way to lock in attribution, securely share and trace where your digital work spreads.

Register your work

Your Work

Drag file here

or

choose a file to upload

Artist Name

(e.g. Andy Warhol)

Title

(e.g. 32 Campbell's Soup Cans)

Year Created

(e.g. 1962)

Specify editions

Register work

.zip

Share Tweet Download .zip

Event Listeners

CREATED BY Harm van den Dorpel

DATE 2015

EDITION 24 of 100

ID 1CbB2YEnBQUkHjWZvqfNNfjK8wh2cg69zQ

OWNER Masha McConaghy

ACTIONS EMAIL TRANSFER CONSIGN LOAN DELETE

+ Certificate of Authenticity

- Provenance/Ownership History

Apr. 17, 2015, 16:15:21

Registered by mail@harmvandendorpel.com

Apr. 20, 2015, 20:54:16

Transferred to Masha McConaghy

+ Consignment History

+ Notes

contemporary

A temporary online exhibition of art for bitcoin

Marian Tubbs

Orbiting (A Melodrama)

2016
video
1920 × 1080 pixels

Edition of 50

Learn more about Digital Editions

→ **Artist Vita**
→ **Description of Work**
→ **Artist Website**

Orbiting (A Melodrama), 2016
4 of 50
Offered for **0.07 Ƀ**

.zip

Share Tweet Download .zip

Event Listeners

CREATED BY Harm van den Dorpel

DATE 2015

EDITION 24 of 100

ID 1CbB2YEnBQUkHjWZvqfNNfjK8wh2cg69zQ

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+ Notes

Certificate Of Authenticity

As of 30 November 2015, 17:36:00 GMT, Masha McConaghy is the owner.
To verify current owner, please visit http://ascri.be/1luAOpo

Currency

Date: 2014
Edition: 3 of 100
Created by: Dan Perjovschi
Owner: Masha McConaghy

ARTWORK DETAILS

Artwork ID: 17uZBwSbLGfXy3vRRMWzF5PMjFVNc1tkQ2
File: currency-2014.jpg (499 KB)

PROVENANCE/OWNERSHIP HISTORY

Apr. 30, 2015, 12:36:19 - Registered by mail@cointemporary.com
May. 01, 2015, 09:46:08 - Transferred to admin
May. 08, 2015, 13:04:59 - Transferred to trent
Nov. 27, 2015, 19:35:14 - Transferred to Masha McConaghy

CRYPTOGRAPHIC STAMP

Use the summary and signature below to authenticate this certificate:
http://ascri.be/1Srz45Q

Summary: Dan Perjovschi*Currency*3/100*2014*2015Apr30-12:36:19

Signature: 438B24CE06182FA3AA82BC285F867D03FB73F3BCC0F73FDBA6
EC2BFF7088E011E60355B7DC75D5745A9D5CA2A8115512FF835
C4ABEF6869BF6A991668A820F3FB03A48C6A9E05834716F6500
68E8E07E5266620BA815948DC265605D23FAF016CB46ACD4BC
BE75F08D0DEBD7AF55E4CB085B9A0A14583F135DBB399121B24
ED1L

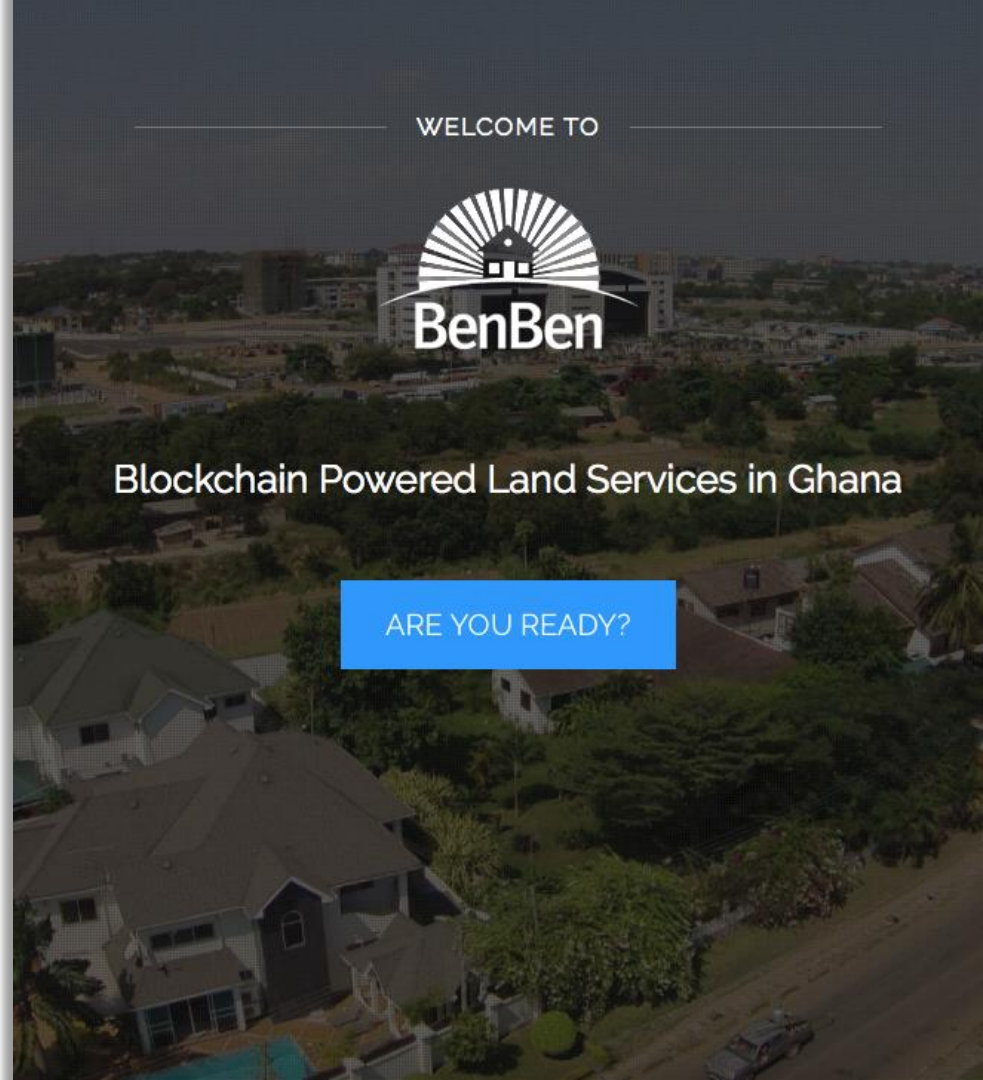
Authenticated by ascribe®

Example 2 :
Land registry
BenBen

BenBen

Vertical:
Government – Land Registry

Value proposition:
Low-cost registry, less risk of corruption



How to generate application ideas

For each characteristic, ask: “how can it help my domain?”

1. Decentralized / shared control
2. Immutability / audit trail
3. Assets / tokens / code

A riff: generate a list of problems you see in your domain, then ask: for this problem, will this characteristic help?

Blockchains for Real Estate: Examples

1. Decentralized / shared control

- Shared registry of land titles. E.g. BenBen for cycle of poverty
- Shared registry of construction materials
- Shared real estate listing service (some won't like this!)
- Shared registry of credentials for realtors etc. Respects privacy.
- Public, signed annotation about each building's information. History, health hazards, rainscreening, etc. Price.

Blockchains for Real Estate: Examples

2. Immutability / audit trail

- Notarization of real estate purchases
- Provenance of each construction artifact in a building. “Green” materials, safety.
- Provenance of a house’s life, including renovations
- Immutable safety documentation. E.g. elevators
- Share notarized docs with auditors, govt, ecosystem
- When listing a property, secure claim of copyright of photographs
- Secure claim of an architecture design
- Secure claim of an interior design

Blockchains for Real Estate: Examples

3. Assets / tokens / code

- Secure, cryptographic transfer of real estate titles
- In a real estate development, incentivize participants to see success in the outcome (from architects onwards). E.g. FOAM
- Sell “voxels” in a condo, to lower barrier of entry to home ownership. Think “million dollar homepage” but for condos.
- Self-owning houses, condo buildings, forests. Capital-light, for good of community over generations. E.g. Terra0
- Incentive systems that connect citizens, governments etc over longer term.

Blockchains for Real Estate: Conclusion

- Blockchains aren't some mystical new thing.
- They're simply databases with new characteristics:
  - Decentralized
  - Immutable
  - Assets

- Modern blockchain database technology can scale to planetary levels (e.g. BigchainDB+IPDB). Look / act / feel like a database.

- Where to apply blockchain tech? Simply, where the new DB characteristics add benefit!

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bigchaindb.com
ipdb.foundation