INTERNATIONAL IDEA
Supporting democracy worldwide

Blockchain in Elections

Promise – Hype – Reality
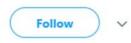
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First Results of Sierra Leone's Blockchain Vote Are In

March 10,2018

National Electoral Commission of Si...
@NECsalone

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#NEC Chair Mohamed Conteh makes clear that "the NEC has not used, and is not using #blockchain #technology in any part of the electoral process." #votesalone

12:33 PM - 18 Mar 2018

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March 18,2018

Why may blockchain be such a disruptive technology?

The Promise

Beyond internet and cryptographic details:
A database – as there are many, including in elections

But:
- traditional databases are run by organizations: EMBs, observers, governments, banks
- blockchain is data on a "public ledger" run by "miners" in "the cloud"

The Promise

No single institution that needs to be trusted

No single institution that can manipulate data

No single institution that can be hacked

A system that can be jointly owned and run

The Promise – it even works
e.g. for multi billion financial transactions without banks

₿ Bitcoin price (BTC)

IDR104,671,873.49

+IDR103,338,155.45 (79.4K%)

1H 24H 1W 1M 1Y **ALL**

JAN 2013   MAY 2014   OCT 2015   FEB 2017   JUL 2018   DEC 2019

The Promise – Elections 3.0?

Elections 1.0: Pencil, paper, ballot box administered by officials

The Promise – Elections 3.0?

Elections 1.0: Pencil, paper, ballot box administered by officials

Elections 2.0: Technology administered by officials

The Promise – Elections 3.0?

Elections 1.0: Pencil, paper, ballot box administered by officials

Elections 2.0: Technology administered by officials

Elections 3.0: Technology run by the public

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The Hype

Many practical challenges building blockchain systems

Weaknesses especially managing the connection
points between blockchain and reality

Which sometimes can defeat many advantages of blockchain

The Hype

Many practical challenges - an example from April 2018

Cryptocurrency Youtube Reviewer Ian Balina
Gets Hacked On Live Stream
Losing Over $2 Million Worth

The Reality

Similar problems could happen in election applications of blockchain too:

- Voter registration
- Results data

Even if the blockchain system works – how does what data get in and out?

The Reality

Online voting usually seen as most promising application

Generally slow progress on online voting globally

Only small pilots so far

Applications in observation now emerging – also in Indonesia

THANK YOU!

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