BLOCKCHAIN

• List of records or transactions that are digitally linked and secured in blocks
• Form of Distributed Ledger
• Distinction between Distributed Ledger and Blockchain
DISTRIBUTED LEDGER TECHNOLOGY

- A distributed ledger is a digital record of transactions (or any data) that is shared instantaneously across a network of participants or “nodes”

BLOCKCHAIN

• Accurate and immutable record of the history of the entire ledger

Image source: Coding is Love. 2018. Build your first blockchain with nodeJS - Coding is Love (ONLINE) Available at: https://codingislove.com/simple-blockchain/javascript/
BLOCKCHAIN

KEY FEATURES

1. Near real-time: real-time settlement of recorded transactions
2. Peer-to-peer network logic: widely accessible
3. Distributed Ledger: constantly updated for every network node (no single-point-of-failure)
4. Censorship Resistant: once a transaction is made and paid for, cannot be stopped
5. Irreversibility: reduces risks of double spending, fraud, abuse and manipulation
Streami Looks to Bring Bitcoin to the Korean Banking System

[ONLINE] Available at: http://seoulspace.com/2016/09/12/streami_looks_to_bring_bitcoin_to_the_korean_banking_system/
SMART CONTRACTS

• A smart contract is a set of coded instructions embedded into a block that self-perform when certain criteria are met.
GOVERNANCE OF BLOCK CHAIN ENTITIES
PRIVATE NETWORK VS PUBLIC NETWORK

Private Network

• Permissioned network
• Participants known and trusted
• Legal obligations imposed on owner

Public Network

• Permission-less
• Anyone can access database, store copy and modify
• Legal obligations uncertain
DECENTRALISED AUTONOMOUS ORGANISATIONS (DAO)

• DAO’s are an entirely autonomous organisation existing in cyberspace
• Operate purely on blockchain technology and embedded smart contracts
• Remove traditional governance model; no company officers, no shareholders agreement or articles of association
• Allow anyone with an internet connection to become an owner and manager of a business
DECENTRALISED AUTONOMOUS ORGANISATIONS (DAO)
IMPLEMENTATION OF BLOCKCHAIN
USES OF BLOCKCHAIN

AUSTRALIAN STOCK EXCHANGE

• Replacement of CHESS system
  » CHESS system performs the processes of clearing, settlement, asset registration and some other post trade services which are critical to the functioning of the market.
  » 27 April 2018, ASX released public consultation paper
  » Intended roll-out date of new system - quarter 4 2020
USES OF BLOCKCHAIN

EVERLEDGER

• Securely tracks and records the authenticated provenance of diamonds from the mine to the store.
USES OF BLOCKCHAIN

POTENTIAL LEGAL USES

• Intellectual property database
LEGAL ISSUES WITH BLOCKCHAIN
SMART CONTRACTS

ISSUES FOR CONSIDERATION

• ‘code is the contract’ smart contracts; identifiable or unfair terms?
• how we determine an individual’s capacity to enter into the contract?
• how do we incorporate contractual principles that require subjective analysis or that are decided on a case by case basis?
  » Eg, Force majeure, frustration, duress, undue influence
• how do we accommodate rights arising “off the chain”?
  » Eg, equitable ownership, voidable transactions
DATA PROTECTION

ISSUES FOR CONSIDERATION

• Privacy Act 1988
• Notifiable Data Breaches Scheme
• Australian Privacy Principal 8 – Disclosure to overseas entities
  » embed model clauses into smart contracts
• Australian Privacy Principal 11 – destroying personal information
  » amend privacy policy
LITIGATION

ISSUES FOR CONSIDERATION

- Spread of blockchain participants
- Which laws will apply?
- Dispute resolution via blockchain members?
- Pre-determined jurisdiction clause
HARRY HOANG
Tailored Accounts
THANK YOU

THE NEXT BUSINESS BREAKFAST CLUB IS ON 8 JUNE 2018.