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**BLOCKCHAIN AND
SMART CONTRACTS**

UT Advanced
Patent Law Institute

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WHAT WE'LL COVER TODAY

What Is Blockchain Technology?	Smart Code and Smart Contracts	Sample Applications	Advantages and Disadvantages
• Centralized and distributed systems • What is a blockchain? • Digital signatures • Hash values • Consensus	• Using smart code to make smart contracts • Replacing traditional contracts • Performance, risks and other issues	• Real estate • Securities trading • Supply chain • IP • Energy	When is it useful to consider employing blockchain and smart-contract technology?

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What is blockchain technology?

CENTRALIZED SYSTEMS

- A central intermediary (e.g., a bank) transfers actual value between two parties and is normally the final authority

- All parties involved in a transaction may keep and use their own copies of ledger, but the local copy isn't authoritative

- There is a single point of failure:

  - if a centralized ledger is lost through IT failure, physical disaster, malware attack, etc., information is lost due to the single point of failure

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CENTRALIZED SYSTEMS

- Typical examples of centralized databases are relational databases we are all familiar with

- Centralized databases may themselves be distributed for redundancy and efficiency purposes without changing their centralized character

  - The point of difference is whether there is a centralized network participant with unique validation or authentication responsibilities different from ordinary participants

Title search: Blockchain and Smart Contracts

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