

Opinions

Beyond bitcoin: Blockchain applications in hospitality

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While blockchain adoption in hotels is still in the very early days, the industry has already seen some benefits from implementation in areas of loyalty, intermediation and relationship and identity management.



By Mark G. Haley

The casual reader of the financial press will see a wealth of hype-laden articles on the latest steep fluctuation in the dollar value of bitcoin or its cryptocurrency cousins, of which there are many.

Regardless of whether you perceive bitcoin and similar alternative currencies as mere arbitrage of the greater fool, the underlying concept and technology—blockchain—is more interesting.

Blockchains generally have several key attributes:

- Data is stored in a chain of blocks, where each block contains an encrypted representation of the prior block in addition to the new transaction(s); usually a distributed ledger system, where the identical data is stored in multiple locations, typically as peers;
- once an entry is made in the ledger, it cannot be changed;
- blockchains are encrypted; and
- any participant can audit the chain.

Blockchains can be public (like bitcoin), private (as with TUI Group’s applications) or a hybrid. Each type of blockchain has different pros and cons according to the purpose of the blockchain.

A public blockchain is open to all and wholly decentralized, but consequently relatively expensive and slow to execute a transaction. Still, it serves well when there is no basis for trust between the participants.

A private blockchain, typically for applications internal to a company, is limited to approved participants and assumes trust. The cost and transactions latency issues go away, but the ledger might be limited to a single node. The hybrid or consortium model is more open than a private blockchain, with access controlled by the sponsoring consortium, and transaction validity is determined by consensual agreement across nodes.

“Smart contracts” represent an interesting capability of blockchains. Although the term pre-dates the development of blockchains and originally implied a broader meaning, one can think of them as taking a paper contract and embodying it in the blockchain, such that when transaction in block A (shipping of goods) is completed by receiving the goods (block B), the smart contract triggers the payment transaction in block C.

While we are still in the very early days of blockchain adoption in hotels, there are some promising areas of blockchain application for the hospitality industry:

- Loyalty**—Blockchain today represents a low-cost, low-friction way to enable different loyalty programs, point-awarding partners and point-consuming partners (“Earn & Burn”) to manage their transactions in a private or hybrid blockchain environment.
- Distribution disintermediation**—Hotels can publish their availability, rate and inventory information to the blockchain, and distributors and consumers can book against that image of inventory in any combination of public, private or consortium blockchain, again in a low-cost model.
- Transaction costs reduction**—Trading partners can use a public blockchain to settle accounts in a decentralized environment where no trust is necessary between participants, but transaction latency is a problem.
- Trading partner relationship management**—Potentially a broader capability that could be applied to any of the use cases above. Consider the ability of smart contracts to automate the administration of an agreement: When Wholesaler W sells its full allotment of rooms at Hotel H, the smart contract automatically offers Wholesaler W only BAR rates.
- Identity management**—A public or hybrid blockchain can store encrypted biometric and document content about an individual, such as fingerprints, photographs, passports and more to verify their identity as a condition of checking into the hotel, generally with the proviso that the individual controls who has access to view the content at any time.

We do not yet understand fully the potential applications of blockchain, but we do know that the development and adoption of these applications will be exciting and bring great opportunity to the marketplace. Hotel News Now readers who are attending HITEC 2018 in Houston are invited to attend a panel discussion on 18 June, titled “Blockchain: Today’s Fad or Tomorrow’s Future?” to learn more about this fascinating technology.

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