USE OF BLOCKCHAIN TECHNOLOGY IN TMIS

PKi INDIA

Chaitanya S Nayak

Dept of MACS

National Institute of Technology Karnataka
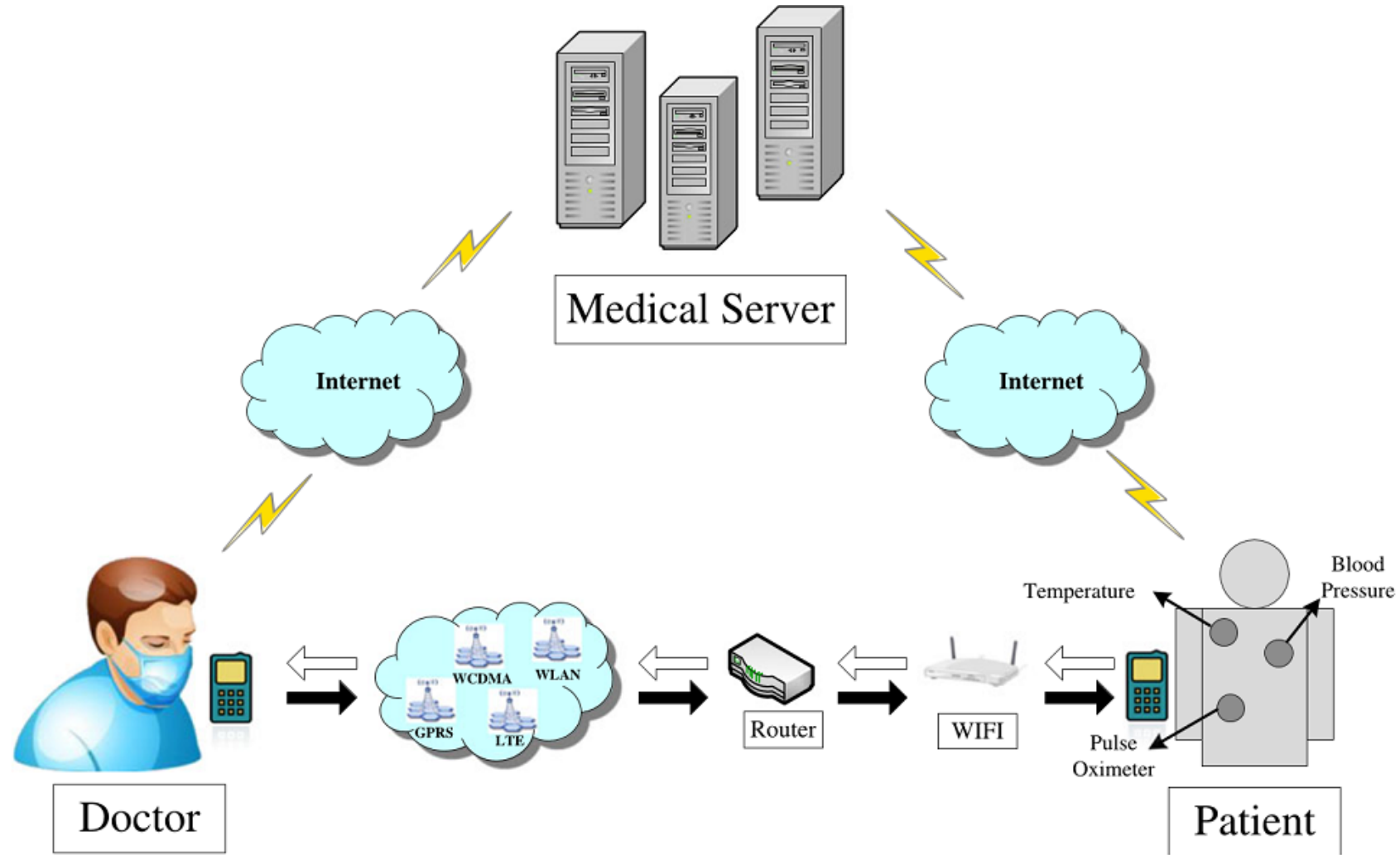
Telecare Medical Information System(TMIS)

- Provide certain healthcare services, a solution to the continuously raising demand in medical and health care sector.

- Provides flexible and convenient e-health care.

- Helps patients to benefit from health monitoring while at home and access medical services over the Internet.

- Efficiency and quality of services depend on the seamless flow of medical and insurance information between the actors (Lambrinoudakis and Gritzalis, 2000).

Scenario of TMIS

Blockchain Technology

- Is a digitized, decentralized, public ledger of digital transactions
- Is a distributed database that takes a number of inputs and places them into a 'block'
- Each block is 'chained' to the next block using cryptographic structure
- Allows to perform peer-to-peer transactions without help of a third party
- Is anonymous and protects the identities of the users giving more security
- Can be used for digital identities, passports, digital voting, smart contracts etc.

Application of Blockchain Technology in TMIS

- Replace transactions by patients' medical information

- Medical information is stored in blocks

- Each block goes to a blockchain after completion of each session

- Each time a block is completed, a new one is generated and each block contains the hash of previous block.

- Patients' identity remains safe during each transaction

- Patient can directly communicate with the physician

References

- Lambrinoudakis, C. and Gritzalis, S. (2000). Managing medical and insurance information through a smart-card-based information system. Journal of Medical Systems, 24(4):213-234.

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Thank You

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