

# Random Talk: Nurturing Autonomy in Conversation – A Peer-to-Peer, User-Expanded Forum for Topic-Driven Dialogue

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## Introduction

**Random Talk** enables users to create and navigate **decentralized, peer-to-peer** chat rooms, dedicated to **specific topics** of interest.

It leverages a **dynamic gossip protocol** and **distributed hash tables (DHT)**, ensuring robust, scalable communication without the need for central oversight.

As users contribute and connect, the platform **autonomously grows and adapts**.

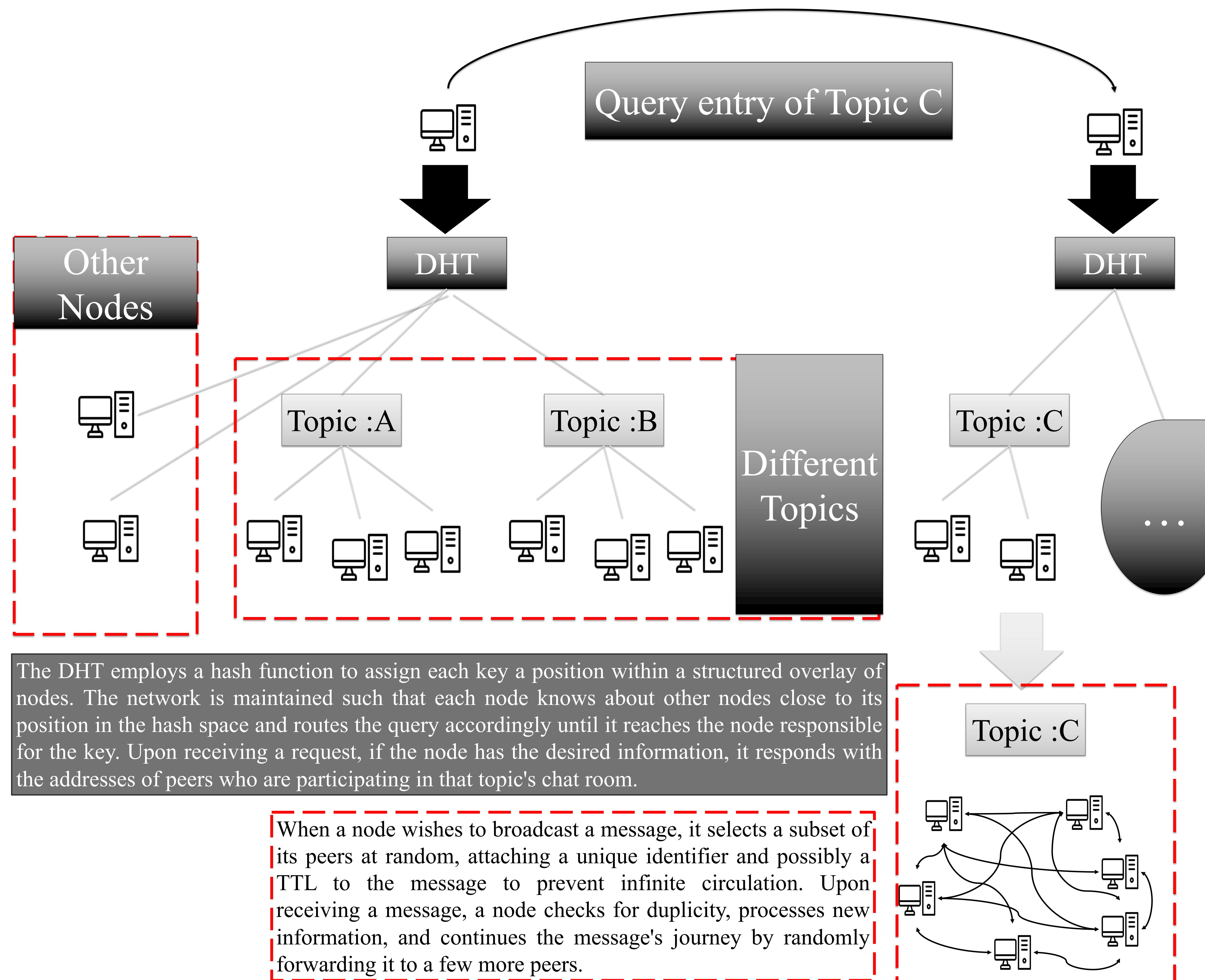
## Materials and methods

**Gossip Protocol:** Employs a robust communication method where information spreads across the network peer-to-peer, mimicking the way social gossip proliferates, enhancing message dissemination and network resilience.

**Distributed Hash Table (DHT):** Utilizes a decentralized and distributed system for efficient data storage and retrieval, allowing users to find peers and topics in the network quickly.

**Libp2p:** Leverages the versatile networking library designed for peer-to-peer applications, facilitating various transport protocols, peer discovery, encryption, and stream multiplexing.

## System Structure



## Conclusions

Random Talk represents a paradigm shift in how we communicate online, moving away from centralized control towards a distributed, user-empowered approach. It leverages the collective strength of peers to build a resilient network that stands firm against censorship and central points of failure.

## Library Used

Go-LibP2p:  
<https://github.com/libp2p/go-libp2p>

## Acknowledgments

The "Random Walk" project leverages the libp2p framework, renowned for fostering decentralized network applications.

## Further information

I'm at [wu.hao11@northeastern.edu](mailto:wu.hao11@northeastern.edu) if you have a question or comment.