



**RESEARCH ARTICLE**

# **Flexible Bloom for Searching Textual Content Based Retrieval System in an Unstructured P2P Overlay Networks**

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***Abstract— By using the fullest of a hybrid P2P protocol, Bloom Cast makes copies of the contents in the network uniformly at a random across the P2P networks in order to achieve a guaranteed recall at a communication cost of the network. BloomCast model works only when the two constraints are met: 1) the query replicas and document replicas are randomly and uniformly distributed across the P2P network; and 2) every peer knows N, the size of the network. To support random node sampling and network size estimation, BloomCast mixes a lightweight DHT into an unstructured P2P network. Further to reduce the replication cost, BloomCast utilizes Bloom Filters to encode the entire document. Bloom Cast hybridizes a lightweight DHT with an unstructured P2P overlay to support random node sampling and network size estimation. Since P2P networks are self-configuring networks with minimal or no central control, P2P networks are more vulnerable to malwares, malicious code, viruses, etc., than the traditional client-server networks, due to their lack of structure and unmanaged nature. All peers in a P2P network is identified by its identity certificates. The identity here is attached to the repudiation of a given peer. Self-certification helps us to generate the identity certificate, thus here all the peers maintain their own and hence trusted certificate authority which issues the identity certificate to the peer.***

***Key Terms: - Bloom Cast; Bloom Filters; Self-Certification; Self-Configuring Networks; Unstructured P2P network***

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