

Transient Community Detection and Its Application to Data Forwarding in Delay Tolerant Networks

ABSTRACT

Community detection has received considerable attention because of its applications to many practical problems in mobile networks. However, when considering temporal information associated with a community (i.e., transient community), most existing community detection methods fail due to their aggregation of contact information into a single weighted or unweighted network.

EXISTING SYSTEM

In Existing System, Detection methods are generally based on weighted networks or unweighted networks. Methods like label propagation have been proposed to detect communities in unweighted networks. To detect communities in both weighted and unweighted networks, the Clique Percolation Method (CPM), also known as K-clique, has been proposed. Recently, AFOCS has been proposed to detect static communities and track community dynamics based on unweighted network snapshots. However, AFOCS aggregates contact information into a weighted or unweighted network. As a result, important contact information, such as the time when nodes contact, is lost.

DIS ADVANTAGES

- It does not detect the reappearance of communities which is critical to data forwarding in DTNs.
- It cannot accurately detect transient communities.

PROPOSED SYSTEM

In Proposed System, Contact-burst-based clustering method (CCM) to detect TCs by exploiting the pair wise contact processes. We formulated each pairwise contact process as the regular appearances of contact bursts, during which most contacts between the pair of nodes appear. Based on this formulation, we detected transient communities by clustering the pairs of nodes with similar contact bursts. Trace-driven simulations showed that CCM can detect TCs

more effectively compared with existing community detection methods. We also proposed a distributed CCM method to make the TC detection feasible in individual nodes, and demonstrated that this method can effectively detect TCs. Finally, TCs are applied to data forwarding in DTNs, where data are forwarded to TCs that have better relaying capability to the destination node. Trace-drive simulations showed that our strategy outperforms traditional community-based data forwarding strategies.

ADVANTAGES

- Detect transient communities by clustering the pairs of nodes with similar contact bursts.
- Achieve a much higher data delivery rate.

SYSTEM REQUIREMENTS

H/W System Configuration:-

Processor	-	Pentium –III
RAM	-	256 MB (min)
Hard Disk	-	20 GB
Key Board	-	Standard Windows Keyboard
Mouse	-	Two or Three Button Mouse
Monitor	-	SVGA

S/W System Configuration:-

Operating System	:	Windows95/98/2000/XP
Application Server	:	Tomcat5.0/6.X
Front End	:	HTML, Jsp
Scripts	:	JavaScript.
Server side Script	:	Java Server Pages.

Database : MySQL 5.0

Database Connectivity : JDBC

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