



Cyclic Temporal Network Density and its impact on Information Diffusion for Delay Tolerant Networks

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Abstract- We adopt temporal graph model to explore the dynamic temporal properties of three mobility datasets in DTN (Delay Tolerant Network), collected from different sources, including one university campus WLAN and two conferences WLANs. With this model, we observe that the temporal network density of DTN changes with time and approximate varies periodically. Then we study the impact of this phenomenon on information diffusion. Our studies and findings can be used for establishing more realistic mobile model, building intelligent routing algorithm, and design advanced applications for DTNs.

Index terms: Delay Tolerant Network, Temporal Network Density, Information Diffusion, Temporal Graph Model.