Homework #2

CS290F - Almeroth

1 Paper review #1

Title	**Coupons: A Multilevel Incentive Scheme for Information Dissemination in Mobile Networks**
Citation	A. Garyfalos and K. Almeroth, "Coupons: A Multilevel Incentive Scheme for Information Dissemination in Mobile Networks", IEEE Transactions on Mobile Computing, vol. 7, num. 6, pp. 792-804, June 2008.
Familiarity	Novice
Recommendation	Likely Accept
Strengths	• Despite some minor deficiencies in the evaluation (see weaknesses), overall the authors perform a very thorough evaluation of the coupons system that demonstrates it is an efficient and effective mechanism for opportunistic data sharing. • Beyond the specific application described in the paper, the authors define a set of general broadcast algorithms that efficiently detect system saturation and can adapt to varying degrees of node density. These algorithms can have general applications and are a significant contribution of the paper. • Overall, the paper is well written. Its objectives are clearly communicated and achieved.
Weaknesses	• The evaluation section of the paper overall is strong and demonstrates the coupons system is both effective and efficient. However, it lacks sufficient quantitative comparisons with alternative systems; thus it is difficult to assess the strength of coupons system relative to other comparable systems. • While the paper does identify a new area of research, it does not provide any direction or guidance for that research. This is more of a missed opportunity than a true weakness. The paper could have benefited from a "future work" section or more details regarding broader applications of the ideas presented. • Several misspelling and grammatical errors detract from what is otherwise a very clear and well written paper.
Detailed comments	
Overall this is a very strong paper that makes a significant contribution; it should strongly be considered for acceptance. The ACK-based adaptive broadcast algorithm in particular is a significant contribution that generalizes to a variety of applications which require quick and efficient data sharing in semi-	

connected environments.

However, the paper does have a few weaknesses that keep it from being among the top-tier. The most significant of which is that the quantitative evaluation does not sufficiently establish the Coupons system as a strong competitor among alternative approaches to data sharing through opportunistic contact. Specifically, the paper could have benefited from following additional analyses:

- A more detailed evaluation of its performance against a "pull" based distribution system such as one described by iClouds. iClouds is mentioned briefly in the introduction as related work, and the authors point out that iCoulds is a pull-based model whereas Coupons is a push-based model. However, there is no justification given as to why they chose a pushed-based model over a pull-based one. An analysis that showed the push-based scheme used by Coupons is either more efficient or more effective than a pull-based alternative would have added strength to the authors' claims.

- The evaluation lacks a quantitative representation of an "ideal" distribution system with maximal efficiency and effectiveness for the given the node densities described in the paper. For example, it would have been useful if figures 4-7 included a hypothetical "ideal" broadcast algorithm that, for the given mobility model and node density, had the fastest possible distribution of data with the least possible amount of duplicate transmission. Without this, it is difficult to assess how much could be gained by efforts to further optimize the broadcast algorithms.

2 Paper review #2

Title	**Enhancing social sharing of videos: fragment, annotate, enrich, and share**
Citation	Pablo Cesar , Dick C.A. Bulterman , David Geerts , Jack Jansen , Hendrik Knoche , William Seager, "Enhancing social sharing of videos: fragment, annotate, enrich, and share", Proceeding of the 16th ACM international conference on Multimedia, October 26-31, 2008, Vancouver, British Columbia, Canada (http://portal.acm.org/citation.cfm?doid=1459359.1459362)
Familiarity	Novice
Recommendation	Accept if room
Strengths	• The paper expands the field of media sharing beyond the typical single producer/single consumer model successfully incorporating elements of social networking into the media sharing process. • The authors demonstrated the viability of their research by implementing their ideas in a working prototype. • The solution addresses problems faced by both consumers and producers of media, as well as by those who host media. Thus the ideas presented in the paper are more likely to be adopted and have the potential for broad impact.
Weaknesses	• The paper is much too qualitative, both in the establishment of its topic as a valuable area of research and (especially) in the evaluation of the design and implementation of its proposed solution. • The goals and contributions of the research are not clearly defined. Rather research objectives and specific contributions are dispersed throughout the paper • Generally, the paper is lacking in technical content. It does not identify the technical challenges addressed by the architecture that is described or the issues faced in implementing it. • There are a relatively large amount of grammatical mistakes and misspellings. (**NOTE**: This wouldn't be a problem for an initial submission as there would be a chance for revisions. However, since I am reviewing a published work, I took this aspect into greater account).
Detailed comments	
The main objective of this research, as stated in section 4, is to "evaluate the usefulness and feasibility of providing media manipulation functionality as a spontaneous activity in a social environment". The paper achieves these goals only in part. The authors have developed an architecture that addresses the needs and concerns of media users, providers, and authors, and the implementation of a working prototype and several user studies further establish the viability of their solution. However, the lack of any sort of quantitative analysis weakens the paper's argument that the solution is feasible one. There is little mention of the technical challenges in designing, implementing, or deploying the proposed	

system, and it is unclear what further research would be required to transform the prototype to a full scale solution.

In addition, the user studies consisted entirely of user's own qualitative evaluations of their experiences, answering surveys with questions such as "What did you like about the system?" While this type of analysis does produce some data indicating which aspects of this particular system the users in the study found most useful, it is less compelling than a quantitative analysis of user behavior and interaction with the system (for example, what features the users *actually* make use of and in what ways). Also, it provides no indication of how frequently or effectively users would make use of the capabilities of the system outside of a controlled study.