

CHANTS 2009

ACM MobiCom 2009 Workshop on Challenged Networks

Beijing, China

September 25, 2009

<http://www.thlab.net/chants2009>

Scope:

Challenged networks are characterized by a heterogeneous mix of nodes, nodal churn, intermittent connectivity, and widely varying network conditions. Conventional Internet access in performance-limited environments such as developing countries with insufficient infrastructure and severe power shortage can be regarded as challenged networks, as can be ad-hoc communication between personal mobile devices; even an overlay network relying on fixed infrastructure might be challenged by a high degree of churn.

Challenges are also posed by a very heterogeneous and potentially resource limited nodes, such as mobile phones, space-based nodes, and sensor and actuator nodes. Performance of the network paths interconnecting such nodes can be highly unreliable and varying in terms of bandwidth, latency, disruption characteristics and security requirements.

The Internet protocol architecture suffers when used in a challenged network setting. For example, when connectivity is intermittent, or the link performance is highly variable or extreme, then one or more of the traditional Internet protocols do not work well. In this workshop following CHANTS 2008, CHANTS 2007, CHANTS 2006 and WDTN 2005, we wish to explore ongoing efforts in dealing with networks that operate under significant challenges as exemplified above; techniques for making applications tolerant to disruptions, churn and high delays are also of interest.

The focus of this year's workshop will be on experiences with challenged networks, such as experimental results, measurements, implementations, full-system and large-scale simulations, operational experiences, deployment problems, and applications for challenged networks. We specifically solicit papers in these respects for the following areas:

- Architecture, design and evaluation of systems that are robust to high rates of nodal churn, unreliable infrastructure, and intermittent connectivity due to for instance high mobility, power saving.
- Characterization of performance and security challenges and measurements of challenged networks; performance metrics and measurements thereof; benchmark tests and scenarios of network challenges.
- Protocol and application design and evaluation with respect to robustness, security and privacy, as well as quality of service and experience.
- Configuration, management, monitoring and adaptivity of systems for challenged networks.

Submissions may include presentations of specific systems or performance measurements, as well as architectural papers addressing new concerns. Papers that bring out problems in the existing proposals for challenged networks or that report operational experience will be favored. Selected papers will be forward-looking, will describe their relationship to existing work, and will have impact and implications for ongoing or future research. We aim to accept approximately 12 papers, and to have a highly interactive workshop focusing on evolving this area of network research and continuing to build its community.

In addition, we seek submission of demo proposals, also to be reviewed by the TPC. The demo proposals shall present recent practical results from the area of challenged networks. In exceptional cases, where live demos are simply not practical to present, poster or video presentations of practical results are acceptable, too.

Paper Format and Submission:

Submitted papers must be no more than 8 pages long, two columns, with no characters in smaller than 10 point fonts, and must fit properly on US "Letter"-sized paper (8.5x11 inches). Margins must be of 1 inch on all edges (top, bottom, left, and right) of each page.

Demo proposal abstracts (to be published as part of the proceedings) shall not be longer than 3 pages plus 1 page description of the precise setup and requirements.

All paper submission will be handled via EDAS. Papers will be reviewed single blind. Click here to submit your paper via EDAS: <http://www.edas.info/conference.php?c=7760>

Important Dates:

Abstract registration Deadline:	22 May 2009
Submission Deadline:	29 May 2009
Notification of Acceptance:	26 June 2009
Camera Ready Due:	16 July 2009
Date of the Workshop:	25 September 2009