



October 19, 2010

Dear Fellow Communication and Network Researchers:

FutureHetNets 2011 is a workshop on “Highly Controllable Dynamic Heterogeneous Networking” on March 24-25, 2011 at NASA Ames Research Center in Mountain View, California. It is sponsored by the Large Scale Networking Coordinating Group (LSN) of the Networking and Information Technology Research and Development (NITRD) interagency community, and supported by the National Science Foundation and NASA. The workshop will bring together leading researchers to discuss the research and development activities needed to enable the end-to-end, scalable, highly controllable, secure heterogeneous networks of the future. On behalf of the LSN Coordinating Group we would like to invite interested researchers to come to this workshop.

Future heterogeneous networks will have multiple modalities (wired, wireless, satellite) and range from low to ultra-high user data rates (100 Gbps+). Major challenges facing the deployment of such networks are:

- Coordination of the widely different data rates offered by different subnets to the users
- Efficient support of heterogeneous voice, video and data services with several orders spread in transaction sizes and rates and with heterogeneous priority
- Development of a common set of protocols that works across disparate networks with very different physical layer attributes
- Development of a network management and control architecture that is capable of efficient and secure operations over heterogeneous networks

To provide the basis for research programs that will meet these goals, the workshop will explore the concept of “Highly controllable dynamic heterogeneous networking.” Areas for exploration include but are not limited to:

- Understanding the flexibility and characterizing the attributes of future physical layer architectures
- Dynamic networking both in network management and control and user resource allocation over heterogeneous networks
- Controls in a wide range of time scales from quasi-static provisioning to per session controls for large transactions
- Re-examination and reconstruction of the entire network protocol stack and repartition of the stack if necessary
- Cross-domain and cross-modality management and scheduling



More information about the workshop is available at:
<http://www.rle.mit.edu/futurehetnets>

Attendance will be limited to approximately 50 invited participants from US institutions. (NSF funding for the workshop covers travel costs and per diem up to \$1000 per participant.) We regret that international participation is not possible.

Participants will be selected on the basis of a one-page white paper. The white paper should contain: 1) name and affiliation, 2) the scientific contributions the candidate is likely to make to the workshop, including a brief description of areas of expertise, 3) reasons why participation in the workshop will benefit the candidate, and 4) a statement indicating whether NSF travel support is requested or is not requested.

Please email the white paper as PDF, with the candidate's name as the filename, to futurehetnets-application@rle.mit.edu by December 13, 2010. Invitations will be issued before the end of January, 2011.

I hope you will join us to make this workshop a success.

Sincerely,

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