BBN INTERNSHIP DESCRIPTIONS

BBN Technologies is a leading provider of advanced technology and research and development which means that R&D--especially the "development" component--is our primary source of revenue, not the cost of doing business. For over 55 years we have helped our customers solve complex technology problems by building practical and affordable solutions. With principal offices in Cambridge, MA and the Washington, DC area, BBN attracts the most talented scientists and engineers who are willing to take risks and challenge conventions in pursuit of new and fundamentally better solutions.

1. **Job title:** Network Engineering Intern
2. **Hiring manager:** Henry Yeh
3. **Location:** Cambridge
4. **Business Unit/Dept.:** Entrepreneurial Initiative
5. **Hours/week:** 40 hrs/week
6. **Estimated start date/duration:** open
7. **Descriptions:**
   a. **Business Unit Description**:
      The Global Environment for Network Innovations (GENI) is a novel suite of infrastructure now being designed to support experimental research in network science and engineering. This new research challenges us to understand networks broadly and at multiple layers of abstraction from the physical substrates through the architecture and protocols to networks of people, organizations, and societies. The intellectual space surrounding this challenge is highly interdisciplinary, ranging from new research in network and distributed system design to the theoretical underpinnings of network science, network policy and economics, societal values, and the dynamic interactions of the physical and social spheres with communications networks. Such research holds great promise for new knowledge about the structure, behavior, and dynamics of our most complex systems networks of networks with potentially huge social and economic impact.
      As a concurrent activity, community planning for the suite of infrastructure that will support NetSE experiments has been underway since 2005. This suite is termed the Global Environment for Network Innovations (GENI). Although its specific requirements will evolve in response to the evolving NetSE research agenda, the infrastructure's conceptual design is now clear enough to support a first spiral of planning and prototyping. Please see geni.net for further details.
   b. **Job Description:**
      Responsibilities include:
      - Work with the GENI team to develop engineering architecture, design, and program materials to support the GENI Program Office (GPO) and GENI participants throughout the U.S.
      - Provide hands-on support for GENI web-based tools for a diverse community of engineers, researchers, and industry participants engineering next-generation network research infrastructure
      - Develop and maintain GENI Program Office applications for web-based tools
      - Support GENI working groups and system engineers preparing materials for nationwide GENI Engineering Conferences.
8. **Qualifications**:
   - ❖ Jr. or Sr. year undergraduate or any level graduate student working towards a degree in computer science or other related field

- ❖ Familiar with Internet protocols and applications
  Proficient with programming (e.g. C++, JAVA) and scripting languages (e.g. Perl, Python)
- ❖ Familiar with UNIX, especially FreeBSD
- ❖ Experience developing/administering open-source web-based tools such as web servers (Apache), extended wikis (Trac), mailing lists (Mailman), databases (PostgreSQL), and software repositories (SVN).
- ❖ Strong written and oral communication skills
- ❖ Ideal candidate will have experience working on software development and systems administration for a network research project in academia or industry

9. Schools of interest: Any. This is part of the GPO's outreach program.

10. Internship Coordinator/Point of contact for Business Unit: Henry Yeh

BBN Technologies is an Equal Opportunity/Affirmative Action employer.