

# Technical "Challenges" facing the Internet

## **Discussion Leaders: Leslie Daigle and Lucy Lynch March 2012**

Looking five years out, if we want to determine the important technical challenges we will be facing in a global context, it seems an opportune time to review what we should be thinking of as "the Internet". Peoples' experience of the Internet is increasingly from a mobile platform -- indeed, in some parts of the world, data service access is only viable from a handset. In five years, will it be the case that even the Web has taken a back seat to mobile data apps? How wide a net should we cast in terms of ensuring the continued health and openness of "the Internet"? What are the key Internet technical challenges to support that experience -- bandwidth, locality of data, interoperability of cloud services, continued support for decentralized services and infrastructure? What role might the continuing push for authenticated/authorized access play?

Recent work with Internet technical challenges has focused at the level of infrastructure (IPv6, DNSSEC, routing security, re-engaging important audiences in the discussion of evolving Internet technologies). There remains much work to be done to ensure that those challenges are properly and thoroughly addressed on a global basis, but, for the most part, the directions are well-understood, and the work is at the level of encouraging adoption and uptake to a critical tipping point.

### **For discussion:**

1/ What's the best way to have an Internet that retains the features below and yet grows with the mobile world; or, where should we be looking for new challenges?

- Global reach, integrity
- General purpose
- Supports innovation without requiring permission (by anyone)
- Accessible -- it's possible to connect to it, build new parts of it, and study it overall
- Based on interoperability and mutual agreement
- Collaboration
- Technology -- reusable building blocks
- There are no permanent favorites

2/ What are we missing in terms of understanding the current state of issues in infrastructure that we should pursue in more detail, in the meantime?