# TAC IPv6 Concepts

## Government/Industry Collaboration

The transition towards IPv6 involves national policy matters as well as industry sector and company specific issues. The workgroup believes that government and industry should collaborate to establish appropriate goals on both a sector and national level, establish tracking mechanisms gauging progress in attainment of target goals, and develop incentives to attain goals in an efficient manner. It is believed that normal market drivers are not sufficient to support a timely and globally competitive US evolution towards IPv6. A formal collaborative effort joining government and industry to oversee the evolution towards IPv6 should be established.

## Sector Driven Approach

The working group believes that IPv6 evolution issues are best addressed within targeted industry or consumer sectors, e.g. consumer electronics, Internet Service Providers, government, etc. As part of an ongoing government/industry collaboration, critical sectors should be identified and their IPv6 evolution strategy identified and/or developed. Target metrics associated with a proposed sector driven evolution plan should be identified and integrated into a program to track US progress on IPv6 evolution. Issues confronting sector evolution should be identified and brought forward to a joint government/industry collaborative effort for policy development and resolution.

## Sector/Company Meetings

The IPv6 working group met with a number of companies and individuals to draw input on these issues. We acknowledge and thank the following companies and individuals: D-Link, Cisco Systems, Silver Springs, OnStar, the Veterans Administration, SIXNET, John Curran, CEO, ARIN, Peggy Smedley, Editorial Director, Connected World Magazine.

## Consumer Electronics Association IPv6 Working Group

The Consumer Electronics Association has established a working group to develop recommendations for IPv6 evolution for the consumer electronics sector. The IPv6 TAC working group believes this can provide a ‘template’ to examine a sector driven approach to IPv6 evolution and should be supported. Objectives might include the development of sector specific evolution goals, timelines, and the identification of evolution issues. Opportunities for sector programs or policies that would encourage or support IPv6 evolution can also be examined. Lessons learned could be brought to other targeted sectors.

## Benchmarking

The TAC working group believes that overall progress towards IPv6 should be tracked across a broad range of sectors and should incorporate metrics providing a more contextual image of status, going beyond mere address adoption. It has developed a draft proposal to begin this process. It expects that as more knowledge of sector needs is acquired, benchmarking metrics can be evolved to provide a more holistic view of the nation’s overall progress towards IPv6. As a representation of national progress, the management of such benchmarking efforts should be under the auspices of the government as part of the government/industry collaborative effort.

## IPv6 Workshop

As a beginning of a government/industry collaboration, the TAC working group is supporting a planned NTIA workshop on IPv6 evolution involving participation of NTIA, FCC, Whitehouse, TAC and other industry representatives. The workshop will discuss lessons learned from the recently passed IPv6 day, dialogue on current policy issues associated with IPv6 evolution as well as benchmarking activities associated with IPv6. The TAC working group recommends that this effort evolve towards an ongoing and more formal government/industry collaborative effort to oversee the IPv6 evolution.

## Sun-setting IPv4

As an exercise and consistent with the TAC working group on legacy issues, the IPv6 Working Group is considering the construct of a ‘sun-setting’ of IPv4. This effort is being pursued to provide some perspective and context on the issues of IPv6 evolution in an environment of dual addressing schemes. The question to be addressed is what policy or environmental changes might be imposed at a future point in time when IPv6 is the dominant addressing mechanism within the nation’s Internet infrastructure to sun-set or limit the use of IPv4 addressing? For example, should potential communication subsidies be redirected at this point to favor infrastructure compliant with IPv6? Should new communications equipment be limited to IPv6 capability? Are there addressing or other governance policies that might limit or accelerate the decline of IPv4 addressing? Should incentive or awareness programs be developed to encourage the abandonment of IPv4 addressing? What timelines would be expected for these events?

## Future Directions

The TAC working group is considering other recommendations and ongoing work activities associated with IPv6. For example, development of an IPv6 awareness program is being considered that might work as a collaboration of ISPs and consumer equipment vendors to incent upgrades of consumer home equipment to IPv6 and increase consumer awareness of the value of IPv6 capable equipment. Industry certification and labeling of equipment attesting to IPv6 capability and shipment of equipment with IPv6 as the default setting may also be desirable. As noted, the long term goal for the TAC working group is to formalize an ongoing government/industry collaboration for IPv6 evolution.