

IPv6 Deployment in Satellite Operator Network

Where are we ?



Alexandre Dulaunoy – ipv6@ses-astra.com

Current Issues

or how to summarize a problem from a blog entry

*“Maybe it’s the culture. **The satellite industry is still dominated by engineers versed in RF and other satellite-oriented technologies rather than IP, as it should be. IP is still somewhat mysterious if not boring, and conversations revolve more around things like modulation, look angles and EIRP. ... Or is it just that no one is asking for IPv6?**”*

Dan Campbell, Feb 27, 2008

http://www.circleid.com/posts/82277_ipv6_over_satellite/

Status in 2008

or the view of a satellite operator

Satellite industry is not only composed of RF engineers...

- ▲ Very often satellite operators are ISP and
- ▲ **already connected to the IPv6 Internet** and
 - SES AS number is 12684, for the curious mind :
 - (986 unique ASes in IPv6 compared to 28408 ASes in IPv4)
- ▲ **providing IPv6 over satellite** (e.g. : relying on legacy IPv4 platform with satellite tunnel broker services or natively on the satellite platform)
- ▲ In 2008, a minority of customer asked for IPv6 in specific area :
 - When IPv4 allocation is difficult due to exhaustion especially in *Supervisory Control And Data Acquisition* or sensor network (6LowPAN) application.
 - Research project.

What's next ?

- ▲ Due to the rapid exhaustion of IPv4 addresses, we are expecting more customers asking for IPv6 services.
- ▲ Providing IPv6 natively to customer is already possible but satellite platforms will evolve in the following years to remove remaining “hidden” (or ATM/IPv4) encapsulation.
- ▲ HTTP came in early nineties while IPv4 in the early eighties.
 - In other words, don't wait for a “killer application” to implement today IPv6. You are setting up the ground for innovation *now*.