INTERNET TRAFFIC JAM

With millions of people using the internet every moment **PLUS** the proliferation of mobile devices that now have internet capabilities (iPods, iPads, tablets, netbooks, eBook readers, navigational devices to name a few), it is no surprise that a cybertraffic jam has begun. Every major highway in the world has experienced bottlenecks and jams; the communications superhighway is no different. But how is this so?

Internet Protocol (IP) provides an identity and location for all PCs and mobile devices in use in the world. Each device is given an **IP address** (think of it like your unique telephone number) so that it can communicate with other devices of which there are an incredible number today. This address is composed of binary numbers (decimal numbers separated by dots). **IPv4**, the system in place since the 1970s, seemed sufficient to handle about 4.3 billion IP addresses….but by the early '90s, the internet explosion signaled that a new protocol would soon be needed so work began on **IPv6**. Since then, its use has developed slowly, picking up speed from the year 2000 and since 2002 it has focused more on new applications (e.g. sensors on house plants that alert you when they need water or more light – not possible with IPv4). On June 8, 2012 IPv6 was put to its first big-scale public test with the goal to eventually replace IPv4. Daily technological advances and newer applications and functionalities mean that IPv6 is absolutely necessary. To compare, a normal address for IPv4 could be 192.168.0.6 vs. IPv6 would be 3FFE:F200:0234:AB00:0123:4567:8901:ABCD.

For the internet user, assuming your device or PC is in good operating condition, the first signs of a "failing" IPv4 system would be the inability to get to web content, or access is very slow or halting…e.g. when using Skype. The solution is to be switched to IPv6, which is the responsibility of the service provider (Movistar, Vodafone, etc.). What do you need to do? Not much….just make sure the router you currently have is compatible with IPv6 by asking your service provider or service technician. In some cases, older routers need to be replaced while others may just need an update to their firmware. Obviously the newest routers on the market are already ready to incorporate this new protocol. If you are curious about how all this works, then visit www.ietf.org and www.internetsociety.org – both sites have technical (i.e. engineering) and as well as less technical information. But for most of us, as long as we have devices that work for us, we're happy, hence IPv6 is just another tech advance to come our way.