**Jainarine Singh**

**The Cognitive Net**

Advancement in technology and data hungry gadgets and services may put a load or even cripple our current internet infrastructure. Cisco has forecasted that by the year of 2020, the global Internet will consist of 50 billion connected smartphones, appliances, tag, car, etc. that our aging internet will not be ready for. Improvements to cope with demands is not a matter of bigger and faster equipment, it’s a matter of a complete overhaul of how our servers and routers handle data. The Cognitive Net is coming by Antonio Liotta explains just this.

According to Antonio, the internet uses a very outdated method of getting data to our smartphones, pc and media devices. The method of packet switching first conceived by Paul Baran divides data into small packets and sends them through routers to be reassembled at their destination. The problem with this method is that packet switching does not take into consideration where the data originated from or the importance of the data nor if the data is voice, video, text, etc. it treats every data the same. This type of philosophy does not work in today’s high speed, high bandwidth data driven world. Like the 4th stage in a network cycle decommission or breaking down of a network because of outdated severs, this is what Antonio suggests. A completely new and most importantly smarter way of dealing with today and future data demands.

Antonio suggested that the first step towards an intelligent network is to allow every connected computer to have the ability of routing data. This would offload traffic and free up bandwidth for larger and more important data. SNMP is a simple protocol but effective protocol in operating a network. Like SNMP, we need a better and smarter protocol in routers that would handle data and terminals of different types. Antonio’s vision is to borrow the concept of a complex network that already exists in nature: the human autonomic nervous system. By implementing this idea into our network, this will make network administrators obsolete for the fact that the network will operate, maintain and secure itself from treats beforehand autonomously without any human intervention. Router will finally be able adapt and evolve on their own just like our nervous system. This will future proof our internet and makes it ready for the new wave of every increasing data hungry gadgets and devices.

This article gives some insight and solution to our internet problem. Antonio’s vision is not farfetched. If we could design a network system as autonomous as our nervous system is we could have a very efficient network capable or running all on it’s on. IBM is trying to make this vision a possibility with its “MAPE” concept. The future of the internet and everything connected to it looks prosperous if this becomes a reality.