



Comments —NBP Public Notice # 27.

GN Docket Nos. 09-47, 09-51, and 09-137; and CS Docket No. 97-80.

Dear Sirs,

The Multimedia over Coax Alliance (MoCA®) is offering the following comment in response to the public document cited above.

MoCA is the standard for home entertainment networking with deployments and trials among numerous US operators including Verizon, Comcast, Cox, TimeWarner Cable, DirecTV and many others. There are tens of millions of MoCA-enabled devices (set top boxes and broadband home routers for instance) deployed in US households. MoCA has also been included in DLNA's Interoperability Guidelines as a layer 2 protocol.

While many of the questions are relevant and need to be addressed, we have chosen a few to respond to directly so as to more precisely and convincingly demonstrate MoCA's organizational expertise and technology value.

A.What technological and market-based limitations keep retail video devices from accessing all forms of video content that consumers want to watch?

1. **What limitations prevent consumer electronics manufacturers from developing a true “plug-and play” device that is network agnostic?**

There are numerous roadblocks to a concise and effective means of transferring video from any source without disruption of delivery of services by operators, or a less than satisfactory experience by the end consumer. There are however, a few requirements that are unassailable. Among these are established product certification programs to ensure interoperability among different products, and related, backward compatibility to assure the ongoing and seamless addition of devices into the home network without disruptions. It is also important to establish criterion for performance, reliability and security.

MoCA for instance, has established a certification program that includes a wide and deep portfolio of interoperable devices for use by operators and their subscribers. Our next generation specification will be backward compatible with previous versions. And MoCA is recognized as the most reliable video transfer protocol available and we have

validated our performance with independent field tests, the results of which are available on the home page of our web site.

2. What technical or market limitations keep certain video devices from accessing video services to which a consumer has subscribed?

The primary and most frequent impediment hindering devices from seamless and unfettered access to video services is reliability. Though reliability can be measured in many ways, two particular measurement yardsticks are unfettered delivery of packets and consistency of stated performance. Though these criteria are technical in nature, they do yield economic benefits as there are no interruptions in service (no service calls by operators) and no return of products (loss in sales by retailers and manufacturers). Only MoCA has proven to meet the strict reliability requirements of the operators and their subscribers.

B. Would a retail market for network agnostic video devices spur broadband use and adoption and achieve Section 629's goal of a competitive navigation device market for all MVPDs?

1. How could the Commission develop a standard that would achieve a retail market for devices that can attach to all MVPD networks and access Internet-based video sources?

The Commission should select communication technologies from the established technology standards. Eligibility should be simple but strict. For instance, there must be operator and retail devices available. There must be millions of devices in the field to prove sustainability. And there should be a roadmap for future improvements and innovation that is backward compatible with previous versions.

C. Can the home broadband service model be adapted to allow video networks to connect and interact with home video network devices such as televisions, DVRs, and Home Theater PCs via a multimedia home networking standard?

1. Are DLNA and HANA the only home networking standards that the Commission should consider in reviewing this model? If not, which other standards should the Commission consider?

There are several standards that should be evaluated. However, when conducting the evaluation, criterion such as performance, reliability, service provider endorsement and deployment, number of devices already in the field, and backward compatibility with previous versions should all be strongly be considered.

As noted previously, MoCA has been included in the DLNA Interoperability Guidelines and fully endorses the DLNA charter. When it comes to video specifically, MoCA has

proven to be the most reliable and highest performance means of distributing high definition format content around the home.

2. What are the strengths and weaknesses of each home networking standard?

Current technology standards all have their strengths and weaknesses. Wi-Fi offers portability and the ability to access content anywhere in the house. Powerline, HomePlug for instance, offers ubiquity as there often two and even three or more electrical outlets in most rooms.

But sometimes wireless and powerline-specific technologies suffer performance degradation due to interference with other devices and thus are unable to transmit HD video reliably.

When it comes to video, reliable delivery is paramount. MoCA technology has established itself among all pay TV operators—telco, cable, and DBS-- in the US as delivering the highest level of performance and reliability. MoCA is designed to operate over coax, an inherently clean medium as it is shielded (protected) from interference or corruption.

There are no infrastructure upgrades (read: cost) either as coax is resident in more than 90 percent of all US homes).

3. Would any of these standards allow consumers to use existing technology? For example, many devices already in consumers' homes can accept firmware upgrades and are already DLNA or HANA certified. Could the Commission adopt a network interface standard that allows those devices to connect to an MVPD network?

Wi-Fi, Ethernet, HomePlug and MoCA for instance, allow for backward compatibility with previous versions of their respective specifications. This should be a prerequisite for any standard evaluation.

I or any member of the MoCA Board of directors is available for additional comment. We would also be most happy to meet in person should you wish with additional information.

Respectively,



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