U.S. Federal Communications Chairman Tom Wheeler's recent proposal to modernize the agency's definition of multi-channel video providers (MVPDs) to include technology companies is a laudable goal and if handled right upon implementation could enable Apple Inc., to finally unveil the Apple TV Steve Jobs talked about making with Walter Isaacson before Jobs death.

Apple's recent announcement of its 5K iMac got me thinking of what the future of Apple TV could look like: A 5K Retina Display HDTV with FaceTime HD camera, built-in microphone, Siri and Spotlight for voice search and universal search etc plus apps, web browsing and/or a new Apple TV box to plug into an existing HDTV with updated functionality (Siri/Spotlight) etc and apps but whichever route they take Internet TV needs access to content and needs to be able to continue to offer it a la carte.

For too long consumers have had trouble with their cable TV bill, having to pay for bundled channels they don't want. The Internet has opened the doors to a la carte TV for cord cutters - those canceling expensive pay TV subscriptions to use online only Internet Protocol Television services by Over The Top (OTT) providers. Chairman Wheeler's proposal could help open the doors to new competitors offering a la carte services enabling them to gain access to exclusive programming that currently requires a pay TV service to access. Internet TV viewers could subscribe to the channels of their choice and these Internet TV services could/should be allowed full access to broadcast channels (which are free over the air) which pay TV companies have to pay retransmission fees for access to (costs that are then passed on to consumers of those services) and premium channels but unlike the pay TV bundle consumers would be free to pick and choose which channels to have and will only pay for what they want.

A consumer who chooses full access to all the content on digital cable TV would end up with a bundle looking similar to existing pay TV with a similar bill for HD DVR, HD channels, premium movie channels etc but the difference is it will be the consumer's choice whether to have all of these channels or not. That being said there are still obstacles here to overcome. Chairman Wheeler in his blog post on the future of TV was correct to address open Internet concerns. While the Open Internet proceeding has finished taking comments the fact is with many cable companies controlling the Internet's pipes and consumers shifting away from expensive pay TV packages big cable companies have begun to play favorites and try to give preferential treatment to their own online services for accessing TV programs online. As long as we have artificial scarcity - data caps on home broadband use that are not applied equally like Comcast's which are a violation of Network Neutrality (watching an hour of House on XFINITY TV does not count against your cap but watching it on Netflix does) though it will be hard to change things.

It wasn't always this way - cable companies used to abide by Network Neutrality willingly but as consumers flee expensive pay TV packages which keep getting more expensive per year these companies economic interests have changed and they have chosen to abuse their market power to try and crush or degrade online competitors offering a la carte solutions despite claiming they would offer them too if media providers would let them. As long as the cable industry is a monopoly (and it is about to get worse if Comcast's Time Warner Cable merger goes through) and most consumers have to rely on cable companies for high speed broadband Internet access the cable companies will have an economic incentive and the ability to stall or kill online TV competitors in their tracks. This is why strong Network Neutrality rules on a solid legal foundation (Title II reclassification) is needed giving the FCC legal authority to protect consumers from online discrimination by their Internet providers.

Also there is the issue of how to deal with advertising online when accessing and viewing TV programs. Should commercials in a TV episode being streamed online count against your data cap? Commercials streamed over the Web when your watching a program with ads should not count against your ISP's data cap if your ISP has a cap.

Then there is the interconnection fee racket Comcast, Time Warner Cable, AT&T and Verizon are using to force companies like Netflix to pay them interconnection fees to speed up access to Netflix's service for Internet users on any of those companies Internet services. Three of those four companies are involved in merger deals (Comcast with Time Warner Cable and AT&T with DirecTV). While many smaller ISPs in the U.S. like Cablevision and ISPs in Europe have willingly joined Netflix's content delivery network (CDN) OpenConnect these four big ISPs have refused to do so and have created an artificial scarcity - closing off access to Netflix on their pipes to force Netflix's hand. The fact that access to Netflix streaming sped up as soon as Netflix agreed to Comcast's extortion suggests there was never any problem on Netflix's end as Comcast suggested but that Comcast deliberately slowed down Netflix streaming for Comcast Internet subscribers to force Netflix's hand. ISP Data Caps should be applied equally to all services. ISPs should not show preferential treatment to those providers who pay them for faster access - equal access online should continue. Otherwise those who can afford to pay more and willing to pay get faster access and everyone else has their access slowed down.

The issue is not about bandwidth limitations - the Internet with Net Neutrality is fast for everyone with a broadband connection what these companies want to do is close their pipes off to those who don't pay extra and make sites load slower for those users or businesses.

Television needs to be updated for the 21st Century and rules regarding multi-channel video distributors should be technology neutral as the Chairman suggests. A few issues still need to be worked out. This can be done but it will be difficult. Also rules requiring cable TV providers to allow consumers to use set top boxes of their choice to access TV programming (CableCARD) need to be updated. CableCARD was a great idea but due to cable company resistance they have stalled or slowed down implementation of those rules, finding loopholes to make it harder for users to get CableCARD certified devices. It is not enough to just replace CableCARD as some suggest with AllVid but whatever new system is implemented has to be enforced.

Interoperability for TV set top devices (a'la CableCARD or AllVID) also needs to be worked on as are encryption issues for TV channels. Encrypting basic TV channels to force TV owners to get a cable box for every TV in their home while it helps line the cable industry's pockets is not in the public interest. Therefore I request the FCC reconsider its order on the Basic Service Tier Encryption proceeding and revise the ruling accordingly. Yes it can help deter cable theft but having to rent expensive cable boxes from the cable company for each TV in our homes can be disadvantageous and is certainly for some if not many. This is an inconvenience that does not have to happen. Allowing cable companies to do this though is a bad idea.

Finally, I would just like to applaud Chairman Wheeler for standing up for consumers and for innovators trying to modernize the TV industry. The playing field needs to be leveled for startups like Aereo and even established tech companies that want to compete with the incumbent pay TV operators. Competition is good for consumers and brings with it more innovation.