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I am pleased to be here today in a different capacity than last time I appeared at the Media Institute as an FCC Commissioner. As the head of a trade association, I can now say, “I have looked at love from both sides now, from give and take, and still somehow it’s love’s illusions I recall, I really don’t know love at all.” Apologies to Joni Mitchell.

Sincerely, it has been wonderful to see the communications space from two very different perspectives. It has been satisfying to discover that my views have not been radically altered by what I have seen as the head of NCTA. The cable industry I find to be both a good business and a good public steward, as evidenced by our recent broadband adoption initiative. I am proud that we focus on pragmatic solutions to matters of public concern and do not lightly look to the regulatory environment for business solutions. As patriots, we want much of what the government wants for the nation—an advanced network that serves all Americans and gives them a real opportunity to share in the American Dream for the Information Age. I find it a comfortable fit.

So, I forgot that the Media Institute speech is kind of a big deal. I have been surprised by the number of folks who have said to me, “Very much looking forward to your Media Institute speech.” “*Really, why?*” “I wouldn’t miss it.” “*It’s ok, feel free. Get some Christmas shopping done.*” I have even had reporters asking for previews, as if I were delivering the State of the Union address. Well, to the esteemed journalists and analysts in the room, put your pens down and relax. I have no intention of making any news that might disrupt my upcoming holiday plans.

My remarks are going to be simple. In fact, I am actually going to talk about simplicity.

**WE ARE TOO COMPLICATED**

Like many of you in this room, I am reading Walter Isaacson’s biography on Steve Jobs, a brilliant inventor and artist who brought together like no other the concepts of beauty and technology to produce—in his words—“insanely great products.”

I never met Steve Jobs, but if I did, I think I would be afraid to ask him what he thought of the communications space. Steve was known to use “colorful” language when rendering judgment, and as we know, fleeting expletives are not favored here in FCC land—at least until next month. Jobs would have criticized much about the businesses we are involved in. He would have cursed at the complexity of our regulatory model, sneered at some of our products and bristled at our marketing.

In communications, we too often make things so mind numbingly complex. Just the language we use can make your eardrums bounce around like a tympana being beaten by a two-year old high on Halloween candy.

We are governed by a 750,000-word statute littered with abominable acronyms. When I first started at the FCC, I did not know what an IXC was, until someone explained to me it was just a long distance telephone company. “Oh, why don’t we just call it that?” “*Rookie!*” “We have LECs and MVPDs, TELRIC pricing and VoIP...now I know my ABCs, tell me what you think of me.” I don’t think Steve Jobs would describe this as “magical.”

Jobs famously believed that “simplicity is sophistication.” The man believed in Bauhaus architecture and Zen Buddhism. Less was more in his mind and he passionately guided his products, his company and his life by these concepts.

I wonder whether we might learn a thing or two about simplicity and embrace our inner Steve Jobs as we think about our services and our regulatory models. Rather than dialog and debate around well-worn constructs like regulation and deregulation, free markets versus industrial policy, competition and monopoly, maybe we could talk more about simplicity—guiding our companies and our regulatory policies by this concept. Can we, as Jobs challenged us, “Think Different?”

## **THE LAWS OF SIMPLICITY**

I am game. Interested in this concept, I did some research and discovered the work of John Maeda. Mr. Maeda is a designer, computer scientist and professor. He studied at the MIT Media Lab and is currently the President of the Rhode Island School of Design.

Mr. Maeda is fascinated with the subject of simplicity and has written extensively about how to make things more simple. Initially, he set out 10 laws, and I believe it is illuminating to consider a few of them and how they might provide guidance for both our businesses and our regulatory approach.

### **Law 1: Thoughtful Reduction**

This law represents the intuitive view that less is more and that we should make things simpler by reducing things to their essence. Maeda stated this principle succinctly as, “When in doubt, just remove. But be careful what you remove.”

This sounds easy in principle until you consider the god-like role it calls on you to play. You have to decide what dies and what lives. There are few people naturally comfortable with putting anything to death. We have an understandable sense of mercy, preferring to let things live. That is a wonderful trait when it comes to people, but we tend to do the same thing when deciding whether to eliminate features in products, or deciding whether we really need some regulation any more. Generally, our instinct is to let things live.

Steve Jobs is a jarring figure because he had no problem kicking things to the curb. As a great innovator, he understood that to really make excellent products he had to demand features and functions be sacrificed on the altar in order to make them simpler and more beautiful.

The proof has been in the Apple pudding. Steve Jobs famously hated on and off switches. He rejected CD slots that used a tray. He pushed the iPod to integrate all its functions into a simple wheel and even developed the iPod shuffle that played songs randomly without your involvement. The MacBook Air jettisoned slots that were standard on PCs. And the iPad attempted to so simplify the computing experience it might kill the PC altogether. The mocking and disapproving howls were everywhere. But they were silenced by success. Steve Jobs understood that people have greater emotional connections to simple things and inherently trust them more than complicated things. Google made a similar decision to have its search page be simple to the point of Spartan. Billions and billions of dollars later it still is that way.

Professor Maeda also teaches that we derive great pleasure from things that are small, light, or thin—that seem insignificant, but pack a punch. The delight in something simple that has surprising power, capability or function is almost giddy. I just bought a new 60 inch smart TV. It is razor thin, with a bezel that is almost invisible. I am surprised how often my neighbors comment on how light it is, how thin it is, even before focusing on the picture. And, when the picture delivers, it unleashes an amazing emotional connection and level of satisfaction. [I always thought flat panels had as much to do with HDTV success as did programming quality.]

And then, there is the typical remote control. A device infested with buttons of every shape, every size and every color. It looks foreboding, unfriendly, complex—definitely not simple. As a device, it promises much but woefully under-delivers. Few swoon amorously when cradling a remote control. My industry knows that it must work hard to build a better and simpler experience and is hard at work on better devices, better programming guides, and better navigation screens. Being better has to mean simpler, and the move to IP networks, app-based functions and, yes, better remotes is meant to revolutionize the consumer experience.

As technology is evolving we see dramatically simpler patterns that are really powerful because they thoughtfully reduce complexity. Consider just a few:

- Miniaturization and Moore’s law. Devices are reaching a lovable scale because of advances in silicon chips. More power, cheaper cost and smaller and simpler devices.
- Digitalization—Zeros and Ones: The whole of communications has been reduced to two simple digits, zero and one. Arranging zeros and ones in different order produces different content. A bit is a bit.
- The Internet is a stupid network: No central control. Intelligence at the periphery.

Regulation can be made much simpler if we focus on reducing it consistent with the simpler nature of the technology involved.

Take as one example the distinctions between local and long distance service. Distance used to be one of the most significant organizational principles in communications. It was very complex for consumers—having to purchase separate plans for local and long distance services and paying radically different prices for each. The “one” plan helped eliminate the complexity and substituted a simplicity that has deepened consumer appreciation of our services.

We need to reduce regulation in recognition of these types of trends.

Stephen Hawking, the great physicist, is working on a unified theory of physics to bridge the laws of quantum physics and the laws of relativity. We need a unified theory of communications that treats a bit as a bit. And we need a thoughtful reduction of rules—when in doubt eliminate.

William of Ockham, a 14<sup>th</sup> century logician, recommended that from among competing hypotheses, select the one that makes the fewest new assumptions. In other words, simple explanations are, other things being equal, generally better than more complex ones. This is known as Ockham’s Razor. We see too often that regulatory battles are built on overly complex or convoluted predictions or hypothesized behaviors. Simplicity seems to be the opposite of Washington.

## **Law 2: Organize**

Maeda’s second law of simplicity is to organize. The law of reduction drives you to get rid of things. However, whatever remains can clutter your room unless it is organized to make the many seem like fewer. Maeda says that there are three common approaches to de-cluttering your home. First, sell the house and buy a bigger house. With greater capacity, the clutter to space ratio is improved. Second, send stuff you do not need to storage. And, third, organize your stuff into a more systematic structure—think closet organizer systems.

In the telecommunications world, we often address excess demand by trying to build a bigger house; insisting on more spectrum or broadband capacity for example. Spectrum is a good example. To be clear, I am firmly persuaded that we need more spectrum to deal with projected demand for wireless services. But, of course, over time we will experience the same thing the new homeowner experiences. The clutter slowly returns to fill your larger rooms and the house looks a mess.

The spectrum problem will require a better organization system eventually. Eighty percent of spectrum is not used 80 percent of the time. Spectrum sharing, unlicensed spectrum and smarter radios will have to be a part of organizing the spectrum band very differently, with blocks not fenced off for exclusive uses all the time. We have made strides with unlicensed spectrum and white spaces as a nod to this reality, but more will be required.

Another area we need to be careful about is broadband. As long as I have been working in this area, the rap is always that the current speeds are not fast enough. Internet evangelicals constantly profess the end of the world because there is not enough capacity for some future magical set of applications or drive us to feel national shame for not measuring up to some otherwise unremarkable country.

But, humans are funny about things like speed. Speed is always relative and you can always go faster. I might call this the Ricky Bobby principle taken from Talladega Nights. Speed is an abstraction that has no inherent value unless evaluated in connection with a specific need. Once speed is “good enough” for most uses, it begins to vanish as a distinguishing attribute.

We can all remember when computers were sold based on speed. Not that long ago we wanted the new Pentium processor, then the Pentium II and then the Pentium III. With each new advance we were left wanting the new one. Conversations about computers were highly technical. We bantered about processors, amount of RAM and hard drive capacity. Today, those things are still part of the computer, but are rarely how a machine is marketed or why it is purchased. We think less about what is under the hood and more about how nicely the thing drives. Computers became simpler.

I think broadband, too, will become simpler. Speed will become less important and certainly less emphasized with consumers. Creative application development will produce high quality experiences with less bandwidth. Video streams will get leaner through compression algorithms. And, as one might expect, broadband will become simpler and more pleasurable. It will just work and have an air or ocean like quality—finite but seemingly vast as Neptune’s hall. Given this direction, I am cautious about organizing regulatory objectives around ever-greater, insatiable speeds. Or, declaring unacceptable levels of competition by filtering out genuine alternatives based on speed, as some are wont to do.

Ask someone in the broadband business – who is a heavier user? – and the answer will be, some bandwidth hog downloading music and movies. Ask consumers – who is a heavy user? – and the answer will likely be someone who is on Facebook all day. We are talking bandwidth as the measure, while the consumer measures heavy use by time, not bytes. Bigger houses are not the same thing as better houses.

The idea of re-organizing our regulatory closet in order to simplify things is another fruitful idea. One critical aspect of organizing is knowing what goes with what. If you have lots of clothes, things seem simpler if your socks are organized together in one drawer, your underwear in another, and your ties grouped together on a rack.

Our communications closet today is organized all wrong. We do have different drawers. The Title II drawer contains telephone companies. The Title VI drawer holds cable companies. Yet we know these things more and more are less and less different.

This raises important questions about what goes with what. This is a critical question in policy for a number of reasons: For one, it determines what products are substitutable for other products in antitrust analysis. It helps determine if a market is concentrated with too few players, or populated with more than enough (all about what goes in the denominator).

A compelling example is the endless battle over media ownership levels. Where you come out on that has much to do with what you are prepared to count as a media voice. Almost 10 years ago, I believed it was dishonest not to count voices like cable, or the Internet, in our calculations of media concentration. Others would not consider alternative voices as part of the same market as broadcast, consequently insisting that the market is highly concentrated. Second, how different services are determines how justified it is to afford different regulatory treatment. In the net neutrality debate, the issue over wireless treatment presented this kind challenge.

Bottom line is that as technology evolves, and markets re-orient, the need to re-organize our closet becomes more important, because by not grouping like things together, you are expanding clutter and complexity and not driving toward simplicity. This has a huge societal cost in terms of unnecessary expense, legal disputes and unsettled regulatory policy.

### **Law 3: Time**

Waiting is frustrating. When we wait for something we quickly view it as unnecessarily complicated. Waiting in the DMV line you scream, “What is the problem!” “Why so long? How hard can this be?” In airports, “Why do I have to take off my shoes? Is this really necessary?”

Things that move quickly, on the other hand, are perceived as simple, no matter how complicated the underlying system might be. Fed Ex has planes flying all night. Packages are flown to central locations in the middle of the country and then fanned out to other planes while you are sleeping. An elaborate system of delivery trucks and tracking systems get the package to your door overnight. To the consumer, getting a package you ordered overnight is simple.

Time may be the most valuable commodity we have. When a business shrinks time for the consumer, he or she becomes intensely loyal.

Technology has enormous power to shrink time. We send the equivalent of a letter electronically and it arrives almost immediately. RFID tags enable suppliers to manage and move product through commerce at high speed. Financial transactions in the trillions can occur in seconds. Broadband delivers the world's entire human record to a high school student in minutes. The quickness that technology brings is why I think consumers have positive feelings about broadband compared to other services, as well as technology products in general.

We as an industry are working—as we must—to do a better job shrinking time. We need the consumer to be able to find our VOD offerings quicker. Search for content quicker. Navigate channel guides quicker. Channels should even change quicker. Shrinking time gives a sense of simplicity, greater loyalty and deeper emotional connections.

One interesting aspect of saving time is limiting choice. We always talk about choice as an obvious virtue. However, a lot of research suggests that too much choice makes us unhappy. Barry Schwartz in his book *Paradox of Choice* analyzes the problem well. The tech version of reducing choice—shrinking time and thus winning your loyalty—is to learn as much about you as possible—your age, your gender, your preferences, your habits, your clothing preferences and the like, so you have less to do. Every web company and interactive company is investing heavily to map who we are and what we do. This can lead to smoother, simpler experiences whether shopping on Amazon, or networking with friends on Facebook, or searching for local restaurants.

However, it also raises very serious questions about privacy and how to balance our right to be anonymous with the value of better experiences. This is a critical issue in public policy. I have a suspicion that the strong personal and emotional connection that naturally flows to products and services that are simple and elegant in this way will continue to float customers to prefer these experiences, even at the expense of some degree of privacy expectations.

Maeda also describes in his book how tortuous it is to wait on a frozen clock. We all know the experience of staring at a computer screen that is supposedly downloading or installing something and seeing a frozen progress bar, or worse, no indication of progress at all. The progress bar on computers is meant to alleviate that pain and let you know what to expect in terms of your wait. We have seen this more and more with things like telephone hold times and cross walks that countdown how long before you can cross. Giving a user a sense of the wait is a way of shrinking time and making something simpler.

This lesson of fair warning and progress is critical when evaluating whether consumers would respond favorably to usage-based pricing with their services. The answer is probably “yes,” if they are shown their consumption progress clearly, and “no,” if they are not.

In regulation, I think a commitment to simplicity should focus on process and provide clearer and more reliable expectations of both completion times and progress. When the FCC introduced the merger shot clock, it was an improvement. You can feel the groan, however, when the clock is stopped in a review. Open proceedings on the other hand with no clear end in sight and no sense of progress create that agonizing feeling of unnecessary complexity—the frozen proceeding that just sits there like the dreaded progress bar that stops moving, but leaves you unsure if the download is done. All Vid, for example, is such a zombie proceeding. The FCC should de-clutter and kill that one.

Regulators and new policy frameworks could make huge strides in simplifying the legal process by focusing on timeframes, disclosure and progress measures. Not only will it alleviate the pain of the process, it will create a better set of expectations and a sense of goodwill toward the regulatory process.

## **CHANGE IS COMING**

We should weigh the simplicity paradigm more heavily, because I think we are going to be forced into reconsidering our underlying regulatory model, even without a complete re-write of the Telecom Act. There are two cornerstones on which the Communications Act rests, and both are cracking.

The first is the venerable public trustee model of broadcasting. Huge swaths of the Act are premised or derived from the 1930’s premise of industries being required to act in the public interest, convenience and necessity. Broadcasting regulation is cobbled together on the dubious premise that spectrum is a scarce resource that is owned by the government, who in its benevolence licenses it for use by broadcasters in exchange for a commitment to operate in the public interest.



The scarcity rationale also under-girds the even more suspect view that broadcasting is less entitled to First Amendment protection than are other forms of communication. The notion of a communications industry being a quasi-public appendage of the state is repeatedly invoked—sometimes openly, at other times more subtly—to justify significant regulatory interventions. It is eye opening to realize that most cable regulation has its roots in the FCC's desire to protect broadcasting from a competitive threat in order to preserve the public trustee model.

Yet, today the Congress and the FCC are on the verge—perhaps for the first time—of declaring that the highest and best use of spectrum is not broadcasting but instead, broadband. I think that undercuts a major premise for a whole host of regulations in the Communications Act. Moreover, in one month the Supreme Court may move to overrule the scarcity rationale for granting the government exceptional authority to curtail speech.

And then what? I believe many broadcast regulations—both those that burden the industry and those that uniquely benefit the industry—will have to be rethought. And, many cable regulations like must carry, too, lose their validity and underlying rationale.

The common carriage model is the second major pillar supporting the Communications Act and it also is badly damaged. The fundamental predicates of common carriage are the presence of natural monopoly. But today it is not convincing that there is an unavoidable monopoly in the market, or that monopoly alone can most efficiently allocate public goods. Too often we see calls for a governmental declaration of natural monopoly as a way of restoring discredited regulatory controls and shifting more power to the state to centrally direct the evolution of markets. Even more seductive to the regulator, is the opportunity to extract socially beneficial concessions as a trade for permitting monopoly.

A few things have undermined this model. For one, the government no longer guarantees any industry segment exclusivity (except rural telcos) as a way to finance social objectives. Second, while honest people can debate how concentrated the markets happen to be, the claim that monopoly is unavoidable because scale efficiencies make it the best way to provide service is tarnished by the facts in the market showing innovation, substantial investment, price discipline and the presence of competitive alternatives. The economic, legal and political credibility for such an argument are simply weak. The stubborn gyration of an evolving and innovating market that continues to deliver more powerful services at cheaper prices for all Americans is real.

As these models whither, we will eventually be challenged to devise what comes next. Today is not the time to offer a complete prescription. But I do feel that thinking about new models through the very informative lens of simplicity has a great deal of merit, and we should invigorate our dialog around the principle. It is in everyone's interest to do so.

I end with a simple wish: That you and yours have a joyous holiday, and that the New Year brings health and prosperity to your families and indeed to all the citizens of our very special nation that too was born of a simple ideal.

Thank you, and THINK DIFFERENT.