

*As prepared*

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*Cable Television in the United States: Trends and Challenges*

Distinguished guests, it is a great honor to be here. I want to thank Vice Minister Zhang (“Jang”) and the officials from SARFT for hosting this conference. I also want to express my appreciation to John and Michelle Sie and their colleagues at Encore International and The China Media Group for helping to arrange my itinerary and to Sam Zhao and the Center for US-China Cooperation for making it possible for me to be here today.

Over the last few days I have had a chance to visit some of the sights in the Beijing area and to meet with some of the officials of the Chinese government. I am grateful for the warm hospitality I have been shown by the people I have met and am greatly impressed by the energy and drive I feel all around this great city.

The 2008 Olympic athletes will be very lucky to be coming to such a vibrant city!

Thank you for giving me an opportunity to share my views with you and, equally important, to hear your views. Exchanging ideas in this kind of setting is vitally important to both of our countries – and I am happy to be a part of it.

First, I would like to say a few words about who we are at the Federal Communications Commission. Then I will discuss the current state of the cable television industry and its regulation in the United States. And finally talk about some important trends going forward.

### **The FCC**

**[Slide 2]** For those of you who are not familiar with the regulatory system in the United States, I will briefly describe the structure and role of the Federal Communications Commission. The FCC was created in 1934 and is the world's oldest communications regulator. Our responsibilities include telephony (interstate and international), broadcasting, cable television, wireless communications, and satellite communications.

The FCC is what is sometimes referred to as an independent agency – and this is for two different reasons. First, the Commission does not own or manage any of the communications companies and facilities we regulate. For the most part, private companies own and control these facilities. Other

government agencies, however, do control the facilities used for government and military communications.

Second, the FCC has some autonomy from the executive branch of the government. There are five commissioners, each with staggered five-year terms. By law, no more than three commissioners can come from the same political party. The Commissioners are appointed by the President and confirmed by the Senate. However, the FCC is technically not part of the executive branch. Rather, we adopt rules that are meant to implement laws passed by Congress.

Another important point about the FCC is that our processes are open and transparent. Before we adopt a regulation, we provide a proposal of our regulation to the public. Interested parties then provide written comments on our proposal and can meet with Commissioners and FCC staff to discuss their concerns. Interested parties can then respond to the comments of other interested parties. Only after this process do we publish a final rule.

And all of our decisions are subject to judicial review. In other words, people or companies that disagree with our decisions or believe that we have misinterpreted the will of Congress can go to court to try and get our decisions overturned.

In virtually all of its actions, the FCC is charged with promoting the “public interest.” Exactly what this phrase means has been the subject of considerable debate. Generally, the public interest focuses on the welfare of consumers. That means that our policies are judged primarily on how they treat the viewers, the listeners, and the callers in the United States. And thus we aim to bring about new and better services as well as lower prices.

From my perspective, the best way to pursue consumer welfare is to rely on competition and market forces. Competition is the best method of delivering lower prices and furthering innovation. Where there is competition, private companies have every incentive to provide better services and at lower prices. Allowing such competition to serve consumers thus often means Government should get out of the way.

However, that does not mean Government has no role to play. Regulation is still vitally important to create an environment that promotes the development of competition. In addition, there are some societal values that competition may not protect. For example, the Commission has rules about the content of broadcast TV and radio programs, to help protect children in the United States from harmful programming. Similarly, we have rules requiring access to communications for law enforcement and emergency aid, to ensure that public safety is adequately protected.

So, with that background and understanding of the public interest, let's take a look at cable television in the United States—where we've come from, and where we're going.

### **Overview of Cable Television in the United States**

**[Slide 3]** Cable television in the United States was developed in the late 1940's. Originally, cable television was used by communities unable to receive broadcast TV signals because of terrain or distance. Cable television system operators located antennas in areas with good reception, picked up broadcast station signals, and then distributed the broadcast signals by coaxial cable to subscribers for a fee.

Since then, there has been tremendous growth in cable television. In 1950, cable systems operated in only 70 communities in the United States and served only 14,000 homes. By January 2004, there were more than 9,300 cable systems serving more than 73 million subscribers in the United States. Indeed, today more than two-thirds (over 68%) of households with TVs subscribe to cable television. And cable is available to 95% of American homes. Cable companies control 75% of the subscription television market.

Channel capacity in the cable television industry has increased dramatically in recent years, with many systems offering in excess of 100 channels. Today, most cable subscribers receive more than 54 channels.

The capacity of a cable system makes it possible for a cable television system operator to provide many services. In addition to over-the-air television broadcast signals, cable systems also offer a diverse range of non-broadcast programming. This includes general entertainment channels as well as channels focused on single-issue topics such as news, weather, business information, and sports, special entertainment features. It also includes channels targeting specific audiences such as children, women, and ethnic and racial groups.

As I'll discuss further below, the increased capacity of the cable system – combined with advances in technology – have allowed many cable companies to offer more than an increased number of channels. Now they also offer a full-range of communications services, including high-speed Internet access and local telephone service.

**[Slide 4]** The regulation of cable television is split between the Federal Communications Commission and local governments, known as “Local Franchise Authorities.” Under federal law, no cable operator may provide service without a license – or “franchise.” Local governments issue

franchises, but do so according to federal guidelines. For example, a Local Franchise Authority may not grant an exclusive franchise to a single company and may not unreasonably deny franchises to new entrants. Local Franchise Authorities also adopt and enforce standards for customer service.

Disputes sometimes arise between Local Franchise Authorities and the FCC. For example, many Local Franchise Authorities believe that they have regulatory authority over cable modem service. The FCC, on the other hand, has concluded that cable modem service is generally not subject to many of the regulations issued by Local Franchise Authorities. This dispute is currently before the courts, which make the final decision in resolving such matters.

**[Slide 5]** Most of cable television's revenues in the United States come from fees charged to subscribers. In 2003, for example, cable operators obtained approximately \$50 billion in revenues, with only about 6% coming from advertising.

**[Slide 6]** Cable in the United States is provided largely in packages of channels, or "tiers." All cable subscribers subscribe to a basic tier. That tier is generally small, containing local broadcast channels, public, educational and governmental channels, and leased access channels. By law, consumers

subscribing only to the basic tier must be offered pay-per-view and premium pay channels like Starz! or HBO on an individual – or “a la carte” – basis.

Most consumers want more programming than is provided in this basic tier, and the next tier available for purchase is known as “expanded” or “standard” basic. It has the most channels, including a large number of popular and diverse channels, as well as many niche programming networks. It often costs about three times the amount of the basic package, and includes about three times the amount of programming.

Another option for consumers is to purchase a “digital” package. Digital service provides a better quality picture, a larger number of channels, and a more user-friendly way to navigate the increased channel selection than the traditional analog technology. However, digital packages are more expensive, and most Americans do not yet subscribe to digital service. Digital cable penetration is currently about 30% of customers.

### **Technological Advances**

The significant advances in technology that have been occurring over the last several years have had a profound impact on the services that cable companies can offer. These changes are providing the industry with both opportunities and challenges. If cable operators invest in their networks to take advantage of these advances, they can offer many more programming



channels with a clearer picture and sound. They can also offer the ability to record programs and even send them around a home network. And they can offer additional services such as high-speed broadband, telephony, and programming “on demand.”

Selling consumers such a “bundle” of services translates into more revenue for the cable company. It also creates a more satisfied customer base that is less likely to leave to the competition. On the other hand, rolling out all these services is a very costly proposition. In addition, some of these services are new and untested on a mass scale. Nevertheless, most of the larger cable companies are concluding that they need to keep up with the latest technology to remain competitive.

**[Slide 7]** Two of the newer technologies that could significantly change how consumers watch television – and thus the nature of the industry – are video-on-demand and digital video recorders. Video-on-demand allows consumers access to a library of television shows that can be as large as the cable company desires. **[Slide 8]** Consumers can choose a show to watch whenever they want. They no longer need to rely on what television networks choose to show at set times. This service is already being offered to many digital cable customers, and is expected to be offered to many more soon. However, there is no standard yet with respect to how to price the

service. And cable operators have not yet devoted a significant amount of capacity to the “online library” (that is, there are not yet many shows from which to choose).

**[Slide 9]** Digital video recorders perform a similar service. They are set top boxes – equipment that a customer attaches to the television – that contain a hard drive and recording capability. Customers can record and store many television shows for viewing at their leisure, in effect creating their own “library” of television shows. The boxes allow for easy recording in advance, too, so consumers do not need to be home (or awake) to record a show. They also allow for rewinding, fast-forwarding, and pausing television just like a VCR or DVD player does. While digital video recorders are not yet widespread, the functions they offer are already changing the viewing habits of consumers, and penetration is expected to increase rapidly.

With technological developments so fundamental to the cable infrastructure, the industry in 1988 helped launch a non-profit entity, CableLabs, to focus on research and development of technologies for the cable industry. CableLabs has had great success. The company develops new products and creates technological standards that any manufacturer can use. It also tests products to confirm that they meet technical specifications and will work with various cable infrastructures as intended. The company

has over 100 employees but also hosts approximately 50 consultants and engineers from various manufacturers.

## **General Economic Regulation**

Cable service is provided almost exclusively by private companies in the marketplace. Cable companies are subject to several different forms of economic and content-based regulation aimed at promoting the public interest.

**[Slide 10]** In 1996, Congress passed a new law – the Telecommunications Act. Before passage of this law, all cable tiers were subject to rate regulation. (Only premium channels, sold “a la carte,” were free from price regulation.) The new law substantially deregulated cable rates, allowing cable companies to set their own prices for all but the basic (very small) service tier. Local Franchise Authorities are charged with regulating prices for the basic tier, following rules set by the FCC. Cable companies can even escape these regulations, however, if the government determines they are subject to competition.

**[Slide 11]** This substantial deregulation of cable led to increased investment in cable infrastructure. From the mid-1990s to last year, the major cable operators have invested at least \$85 billion dollars in upgrading their infrastructure.

**[Slide 12]** A significant form of economic regulation that remains in effect today lies in the Commission’s authority over mergers and

acquisitions. Cable operators hold various sorts of communications licenses, and transferring a license requires FCC approval. Thus, every significant change in ownership of a cable company must be approved by the Commission. The Commission can and does use this authority to take steps to protect consumers.

In addition to this case-by-case review of mergers and acquisitions, Congress has also sought to put in place some clear limits on the size of U.S. cable operators. In 1992, Congress directed the Commission to establish “reasonable limits” on a cable operator’s ability to grow, both horizontally and vertically. Through a series of rulemakings, the Commission prohibited cable operators from serving more than 30% of all U.S. subscription video customers. The Commission also prohibited most operators from using more than 30 channels to carry programming they own. However, these limits were challenged by the cable companies and have been struck down by the courts. The Commission has opened a proceeding on establishing new or revised rules.

**[Slide 13]** Even with these rules, there has been significant consolidation in the cable industry. Currently, in the United States, four companies control more than 60% of cable subscribers. And 60 companies

serve 97% of all U.S. cable subscribers. The remaining 3% are served by cable operators with fewer than 10,000 subscribers each.

### **Regulations Governing Allocation of Cable Capacity**

[Slide 14] There are also a number of important rules that govern the kind of programming that must be carried. In general, all local commercial broadcast stations have the right to be carried on the local cable system through what is known as “must-carry” status. Most cable systems must set aside up to one-third of their channel capacity for must-carry broadcast stations.

Every cable system across the country is also required to carry at least one local noncommercial educational (“NCE”) station. Any cable system operating in a market where no local NCE station is available is required to import one NCE station’s signal.

With that understanding of some of the most important aspect of cable regulation, I’d now like to turn to some of the most important trends and challenges – to both regulators and the industry.

## **Convergence and Competition**

Perhaps one of the most important trends is convergence. Different kinds of technologies, which are regulated in different ways, are competing with each other more and more often. We've seen this with satellite companies competing with cable companies in the video market. And cable companies competing with telephone companies in the broadband market. Now cable companies are even competing with telephone companies in the telephony market. This kind of competition is terrific for consumers, driving prices down and leading to the introduction of new services. It is also very challenging for the companies and for regulators. Because different technologies have traditionally been regulated in different ways, it is sometimes hard to ensure a level playing field. As regulators, we want companies to compete on their merits and not simply to exploit regulatory differences.

### **DBS Competition**

**[Slide 15]** For cable television, the most direct competition comes from direct broadcasting satellite service or "DBS." DBS did not exist before 1993, but now has more than 22 million subscribers, served by 3 different facilities-based providers. That is an increase of 12% from last year. Earlier this month, industry data was released that showed that in the second quarter,

DBS gained almost 800,000 customers while cable lost around 280,000 customers. DBS comprises approximately 20% of all households subscribing to subscription video providers, a number that has been steadily increasing. DBS continues to attract consumers who never subscribed to subscription video services, as well as consumers switching from cable service.

**[Slide 16]** Although cable and DBS provide very similar services, they are regulated under different rules. Perhaps most importantly, only cable providers are subject to statutory “program access” requirements. These rules were designed to ensure that a cable company’s competitors have the ability to carry programming in which the cable company has a financial interest (so-called “vertically integrated” program services). The rules require content providers affiliated with cable systems to provide competing video providers (both cable and satellite) access to their content.

Although, by statute, the program access rules apply only to cable providers, the Commission has sought to provide some regulatory parity through its authority to review mergers and acquisitions. In December of 2003, the Commission approved the transfer of control of DirecTV – the nation’s largest DBS provider – to News Corp.. News Corp. controls considerable programming assets in both broadcast and cable. As part of the merger approval, the Commission required News Corp. to share its existing



and future cable programming services on non-discriminatory terms and conditions, for as long as the FCC's program access rules are in effect. The Commission also required News Corp. to provide its competitors with nondiscriminatory access to any broadcast television station that it owns or controls.

### **Broadband**

**[Slide 17]** In the United States, while cable and telephone companies compete directly, cable companies are the dominant providers of broadband service. Last year, over 16.4 million connections were served by cable modems. **[Slide 18]** At the end of 2003, cable modem service was available to approximately 90 million homes, or 88% of all households.

Last year, 28.2 million American homes subscribed to a high-speed data service (defined as providing speeds exceeding 200 kilobits per second (kbps) in at least one direction). **[Slide 19]** Of these, almost two-thirds were served by cable. The next biggest source of broadband – telephone companies using asymmetric digital subscriber line (ADSL) – accounted for 9.5 million high speed lines. Cable modem service generally offers higher speeds than ADSL. **[Slide 20]** In just the last four years, there has been tremendous growth in the number of high-speed lines.

## Telephony

The newest trend in convergence and competition is the provision of telephone services over cable lines. Cable providers now offer telephony to 2.7 million customers. Cable companies have been serving an increasing number of telephone customers through traditional circuit switched telephony for a number of years. For example, Cox Communications has been delivering circuit switched telephony since 1997. By the end of 2003, Cox served almost one million voice customers.

In the last year, however, a number of providers, including Cox, have begun offering telephony based on Voice over Internet Protocol or “VoIP.”

**[Slide 21]** VoIP is a technology that allows voice traffic to be packetized and transported as data, without the need for the traditional circuit switching of the public switched telephone network. VoIP is being offered today by a wide range of companies including local and long-distance telephone companies, cable operators, and a new crop of providers such as Vonage, ePHONE, pulver.com, and ICG Communications.

VoIP offers several advantages over traditional circuit switched telephony. First, VoIP can be offered over any broadband line, including, of course, a cable modem connection. A VoIP phone can also be moved around the country and still use the same telephone number. VoIP service

often allows subscribers to use their computers to store and manipulate voice mail messages. And VoIP is cheaper than traditional phone service. Right now, several VoIP carriers are offering unlimited local and long-distance calling for about \$35 (and some even lower), compared with more than \$50 for the same service over the circuit switched network.

**[Slide 22]** Because VoIP is a relatively new service, its regulatory treatment is not entirely clear. Most people agree that VoIP providers should be subject to the same public safety and law enforcement requirements as circuit switched providers. For example, circuit switched telephone providers must provide information on a caller's location for emergency calls and must allow access to law enforcement personnel. People generally agree that VoIP providers should be subject to these same obligations, and this month the FCC tentatively held that law enforcement should have access to VoIP.

At the same time, there is considerable disagreement over whether VoIP providers should be subject to the same universal service and long distance charges that apply to traditional circuit switched providers. Universal service is a program in which telephone rates for people in high-cost, rural areas and people with low incomes are subsidized by adding charges to everyone's telephone bills. Long-distance providers pay local

telephone carriers to originate and terminate their calls. Many argue that, as a new service, VoIP should not be subject to these kind of charges. On the other hand, VoIP appears to be taking off at a rapid rate. If VoIP is not required to pay universal service and long distance charges, it may undermine both of these programs. Both the Commission and Congress are currently wrestling with these issues.

### **Cable Bundling and Pricing**

**[Slide 23]** Cable pricing has become an important issue because of concerns about the rising cost of cable television to consumers. According to some estimates, cable rates have increased nearly three times faster than the rate of inflation since 1996. Rates have increased as much as 58 percent since January 1996.

**[Slide 24]** As I mentioned earlier – and will touch on again in a moment – some of this may be explained by the significant investments cable companies have made in their infrastructure. It may also be caused in part by the increasing cost of programming. Nevertheless, many people have questioned recent price increases.

**[Slide 25]** Consumers' cheapest option is to buy the basic cable tier, which, as I mentioned earlier, contains few channels but only costs around \$15. Most consumers, however, want more programming, and the next

“step” is to buy a pre-set package of over 50 channels, costing around \$40.

Another option for consumers is to purchase a digital package, which starts at around \$55. Purchase of a digital package is necessary to have access to new services like video-on-demand.

**[Slide 26]** Recent data show the average consumer watches only about 12-17 channels regularly. The top 10 cable networks account for 50 percent of all viewing, and the top 20 channels account for 75 percent of all such viewing. Although the least watched 30 channels pass an average of just under 70 million homes, only about 250,000 (or less than half of 1%) watch them during any given day.

Some people argue that consumers may be paying for a lot of channels they don't watch in order to get the ones they do want. Many people are now arguing for cable companies to offer consumers more choice when it comes to the channels they buy. On one extreme, some have urged Government imposed regulations requiring all channels to be offered “a la carte.” Others are calling for voluntary action by cable operators to enable consumers to pick among several packages (for example, a “family tier” or “sports tier”). Alternatively, some call for choice within the existing expanded basic or digital tiers, for example, allowing consumers to choose 40 or 50 channels for one price.

Cable companies, however, object to these efforts for several reasons. [Slide 27] First, they argue that their higher rates are justified, as they have used rate increases to vastly expand and improve their offerings. Since 1996, cable networks have invested more than \$69 billion in programming. In 2004, for the first time in history, cable networks won more Emmy nominations (220) – industry awards for quality programming and performances – than the broadcast networks (206).

Cable networks have also begun to offer a wide range of new video and communications services. Many cable systems now provide commercial-free music channels, high definition television, video-on-demand, and digital video recorders. And cable programmers are leading the way in creating high definition content.

These new services were made possible by cable's massive investment in new facilities and programming. Cable operators have invested \$85 billion of private risk capital (approximately \$1,200 per customer) upgrading 1 million miles of plant with fiber optics, installing 30 million digital converter boxes, and providing 88 percent of homes passed by cable with access to interactive digital facilities.

The cable industry also argues that their costs of programming have risen substantially. For example, syndicated television shows now command

\$500,000-\$1 million per episode, with certain popular shows regularly costing over \$1 million. **[Slide 28]** As another example, the cost of sports programming has risen tremendously: the National Basketball Association has risen 175% since 1997 (\$278 million per year in 1997; \$765 million in 2003); the National Football League is up 106% since 1997 (\$1.1 billion per year in 1997; \$2.27 billion in 2003); the National Hockey League has risen 173% since 1999 (\$44 million per year in 1999; \$120 million in 2003); and Major League Baseball has risen 44% for the 2000-2006 contract.

**[Slide 29]** Cable companies also argue that a la carte programming will not lead to lower prices and will have detrimental effects on cable programming. First, they argue that mandated a la carte pricing will actually increase prices for consumers. They believe that viewers will watch fewer channels in an a la carte world and thus cable companies will lose advertising revenues. To offset these losses, they believe cable networks will have to raise subscription fees, and this means higher prices for consumers. Indeed, a recent study by the Government Accounting Office, an arm of Congress, found that a la carte could “result in higher per-channel rates” for consumers.

Second, cable companies argue that more consumer choice would reduce the diversity of programming. That is because the sources of revenue

for a cable network – subscription fees and advertising fees – both depend on the number of subscribers the network reaches. Cable companies argue that many networks, particularly niche networks that target small, underserved audiences, might not be able to attract enough subscribers standing alone to generate the license fees or advertising revenues to cover the costs of the network. As a result, many existing niche networks might die and new networks might not be created.

Third, cable companies argue that there are significant technical problems with providing a la carte programming to analog customers, and that these technical problems are cost prohibitive. Currently, approximately 50 million subscribers are analog-only. The industry argues that providing these customers with more choice in programming would effectively require providing a new set-top box for every television in each subscriber's home. This could cost billions of dollars that could be used for new, innovative services.

The FCC is currently looking at all of these issues. In May, Congress asked the Commission to study the issue, and I expect we'll release the study this fall. I look forward to wrestling with these difficult issues.



## Content Regulation

Another issue that has become increasingly important in recent times concerns the regulation of programming content. In the United States, broadcasters and cable operators are generally free to choose the content they provide to their viewers. However, the Government has an important interest in the content of television, particularly in enabling parents to protect their children from objectionable programming.

**[Slide 30]** For broadcasting, the Commission has regulations prohibiting the airing of “indecent” material between 6:00 a.m. and 10:00 p.m., when children are most likely to be watching. The Commission has defined broadcast indecency as language or material that is “patently offensive.” Violators of these rules are subject to fines and potential loss of licenses. Thus, although the Government does not censor programming, it does punish those who violate community standards.

However, our indecency rules don’t apply to cable. **[Slide 31]** When our indecency rules were first enacted, cable television had very few viewers. People were less concerned about the content of programming viewed by a small number of people, who chose to pay money for this special service. For these reasons, among others, the Supreme Court – our highest Court – has allowed much more content regulation of broadcast than of cable. The

Court has thus far held that the First Amendment of our Constitution, which protects freedom of speech, limits Government's power to regulate indecent content on cable.

Today, however, about 85% of people watch cable television or some other subscription television. And most people watching TV cannot distinguish between cable and broadcast channels. It thus may not make sense to treat them differently, and many people have begun to advocate further content controls on cable TV.

**[Slide 32]** In the mean time, we have used more indirect means to police indecency on cable television. For example, broadcasters and cable programmers provide ratings of programming that contains violence and sexual or other potentially inappropriate material. The ratings symbols appear for 15 seconds at the beginning of all rated programming. Thus, viewers have some warning that they may find what they are viewing offensive. And most TVs and most set-top boxes contain what is called a "V-chip," which can block programming with certain ratings if the viewer so chooses.

## **Conclusion**

**[Slide 33]** On nearly all the issues before the Federal Communications Commission we are required to do a balancing act. We must balance freedom of speech with the need to protect children from inappropriate programming. We need to balance the desire for a free and open market with the need to allow new ideas and new enterprises to compete even against big companies.

It is my sense that regulators in China and around the world wrestle with many similar issues. Conferences such as this one can help by allowing us to exchange ideas. We may find that a solution that works in one country can, with some modifications work in another.

But I think that as the new communications marvels shrink the world, it might be a good idea to find ways for government regulators to communicate across borders on a more regular basis.

I therefore welcome the opportunity to have regular informal discussions to exchange ideas and information between regulators in China and the United States and other countries. This can be done by electronic means and by personal exchanges.

If this idea is something that the Chinese officials might find useful I would welcome their thoughts as to how best move forward.

Thank you again for the opportunity to address you today.