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PRINCIPLES FOR TELECOMMUNICATIONS REGULATORY REFORM

Dennis Fazio†

I. INTRODUCTION

In defining its involvement in the important effort of reforming our state’s telecommunications laws, the Minnesota High Technology Association (hereinafter “the Association”) has determined that its most appropriate role is to be an advocate for substantial comprehensive change and an educational resource for our policy makers. As a first step in this involvement, the Association feels it can best represent its members’ interests by establishing and advocating for a set of principles upon which any reform efforts should be based. Our view is that laws governing telecommunications services should be oriented toward accommodating and encouraging the benefits of technology advancement and the resultant economic benefits. We do not believe it adequate for reform efforts to only address contemporary regulatory challenges.

The Association sees the Internet as a new primary communications channel that will ultimately be the center of all two-way telecommunications activity. It is therefore imperative that our state’s policies be substantially modified to accommodate the potential that is being driven by the new packet-switched transmission systems of today and tomorrow. We believe our state can leap ahead with its willingness to embrace this new technology environment. It must establish a corresponding environment that will give Minnesota businesses and the state as a whole a significant

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The most important point to hold visible is expressed in the first principle: that reform results should be based on the opportunities and potential of the future, not only the requirements of the present. Certainly all would observe that the new telecommunications technologies have changed the world to the extent that our existing telecommunications services laws are no longer pertinent. It is important that we alter these laws significantly and in such a way that we creatively embrace the new environment.

This environment is created and driven by packet-switched transmission technologies that forever and completely alter the old operational and economic models of telecommunications service delivery.

Until recently, our most visible telecommunications services were delivered to users over wireless broadcast or coaxial cable for radio and television, and fiber and copper wire for voice telephony. (Indeed, even the definition of the term “telecommunications” has, in some cases, been narrowed over time to refer to two-way voice communications only.) These services were established and delivered as vertically integrated systems. Regulation of these traditional services was established based on the applications delivered and the attributes of their corresponding delivery systems.

Voice Telephony System

Voice telephony

TDM

Fiber/copper network

Video broadcasting

FDM

RF carrier

Coaxial cable network

Cable Television System

In the case of voice telephony, the system employed a physical network of fiber optic and twisted-pair copper cable, using Time-Division Multiplexed (TDM) digital transport. Cable TV was delivered over a physical infrastructure of coaxial cable using Frequency-Division Multiplexed (FDM) Radio Frequency (RF) channels.

With Internet technologies, the physical infrastructure is the
same, but the transport mechanism has changed to discrete independent digital packets carrying any application. The physical network, packet transport, and application services must be viewed as separate layers that can be provided by multiple separate and competing businesses. With fully competitive markets working at the upper two layers, the need for any regulation or control over application and transport services will no longer be necessary. Telecommunications now must be viewed as the term was originally coined: communicating over a distance, and that communication now consists of multi-media content carried in packets over a wide variety of physical means of delivery.

That is why we strongly advocate that laws be radically altered to accommodate this new economic and operational model, preferably through the absence of laws and the natural encouragement of competition, or when necessary, through its limited presence to protect the public interest. That is why we also state that reform that is limited to addressing current inequities will be inadequate to allow Minnesota to reassert its place as a leader in technology industries.

Just as technology developments have substantially altered the overall environment, they have also created many new alternatives in the physical network layer. It is important that these new delivery mechanisms, which were not part of previous vertically-
integrated systems, not be overlooked. We must encourage them and any other unforeseen delivery technologies to provide the best long-term future benefits. Legislative reform should encourage the deployment of many types of communications technologies from all providers with no advantage given to any one technology. However, with many new and perhaps untested service companies coming onto the market with existing or new technologies, we do also require that there be a basic quality and reliability of communications services for all users with sufficient means of accountability from anyone providing such service. This could be accomplished through any of several methods including the provision of sufficient competitive choice or legal requirements if needed, being mindful that the primary intent is to encourage competition, not stifle innovation.

Telecommunications service companies will naturally emphasize the more profitable areas for deployment of new services. We believe there is a potential for adverse impacts on the geographical balance of the state's economy and development if they are left completely unfettered to do so. Therefore our new laws should encourage and support broadband deployment beyond urban business centers to include rural areas (e.g., rural community or business centers but not necessarily to every outlying location) and urban residential areas. Though widespread broadband access is the desired end, there will be some time until it is economically available. In the interim, we should promote affordable voice AND data service (via narrow-band access) for all Minnesota residents and businesses. In the information age all citizens should have access to effective electronic government services, available lifelong learning resources, and the on-line business opportunities. The time has passed when voice service is sufficient for an advanced information economy. New laws should promote access to narrow-band services for all citizens. We define narrow-band data service as that delivered via analog modem over traditional voice channels with a minimum bandwidth of 20Kbit/sec.

Public acceptance of new physical infrastructure is critical. Haphazard regard for proper construction methods and disregard for neighborhood safety and aesthetics will only delay new advances. We recognize that significant effort has already gone into the establishment of some practices and these efforts should be carried forward. We desire that our codes recognize public safety issues, especially in regard to outdoor wiring installation practices and radio transmitter placement. We also seek to protect public and private property from unnecessary damage-especially streets, highways and existing telecom-
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Communications infrastructure. Laws to encourage joint builds and minimally intrusive construction techniques should be emphasized. The recent disturbing trend of blatant disregard of established standard practices for avoiding damage to existing facilities and the ensuing disruptions of service that result must be stopped and violations met with more severe consequences.

Finally, we recognize that much of our telecommunications infrastructure was deployed in a previous era under different rules and for different purposes. Certainly some accommodation can be given to operators who deployed expensive facilities in good faith under those previous laws and requirements, and especially those who must continue to serve those customers who require the older, traditional technologies and facilities. Technology advancements have changed the rules rapidly and extensively, and will continue to do so. It is incumbent upon technology companies to recognize rapid change and be prepared for it. We believe it is not a necessity for new laws to address all issues to protect businesses from their own deployment decisions. Our position, then, is that regulations should provide for some protection of stranded investment that was mandated by legislation or agency rules. But there must be an acknowledgement that there may be even larger economic losses to Minnesota if the opportunities of new technologies are not aggressively pursued.

III. CRITICAL COMPONENTS OF REFORM

This is a list of requirements which Minnesota high-tech businesses believe should be critical components of any legislation seeking to reform telecommunications regulation. These businesses, represented by the Minnesota High Technology Association, believe that any state or local regulatory reform should:

(1) Be based on the opportunities and potential of the future, not only the requirements of the present.

(2) Encourage the deployment of many types of communications technologies from all providers with no advantage given to any one technology.

(3) Encourage a basic quality and reliability of telecommunications service for all users with sufficient means of accountability for anyone providing such service.

(4) Encourage and support broadband deployment, beyond urban business centers, to include rural areas and urban residential areas. As an interim step, promote affordable voice and data service (via narrow-band access) for all Minnesota residents and busi-
nesses.

(5) Recognize public safety issues, especially regarding outdoor wiring installation practices and radio transmitter placement. Protect public and private property including streets, highways, and existing telecommunications infrastructure from damage.

(6) Provide for some protection of stranded investment that was mandated by legislation or agency rules while also acknowledging that there may be even larger economic losses to Minnesota if the opportunities of new technologies are not aggressively pursued.