

KMB VIDEO JOURNAL  
40th Invitational Conference

Report of Proceedings

INTRODUCTION. The 40th KMB Invitational Conference took place October 3-7 at the Sirata Hotel & Conference Center in St. Petersburg Beach, Florida. The subject of the conference was "Broadband Applications That Serve National Needs and Society." About 40 experts, decision-makers, and opinion-leaders participated. Included were a number of state Senate and Assembly members, from across the country, together with state utility commissioners, academics, public organization executives, top Washington economists and lawyers, and national trade association leaders.

IN GENERAL. The conference involved eight panel discussions -- together with speakers and responders -- plus talks by three nationally recognized "Information Economy" experts. There was extensive and intensive audience involvement, as one might expect, given the "manageable" size of the overall conference. Most sessions focused on wireline broadband topics and proposals, though there was also discussion of wireless and related spectrum management issues.

A BROADBAND OVERVIEW. Dr. Jeffrey Eisenach, President of Criterion Economics (and one of the founders of the Progress & Freedom Foundation (PFF), in Washington) quickly surveyed the U.S. broadband service and investment environment. Introduced by Free State Foundation President Randy May, Eisenach showed (a) the exponential growth of broadband and (b) indications that U.S. broadband penetration levels are quite comparable to those of other countries.

Dr. Eisenach noted that Internet use appears to have reached about 70% of the population, then slowed -- as in other countries. But most residential and many business customers now have multiple broadband service options, he said, and the number of "user

hours" seems to be growing. Dr. Eisenach remarked on several of the newer applications -- "synthetic reality," for example, and "ultra-high definition television," as well as medical monitoring. He touched on the convergence of wireline and wireless services, and said that given the current rate of technological change -- and, growth of competition -- a hands-off approach by Government was best (in that regard, he quoted remarks by one of President Clinton's early technology advisers, Mr. Ira Magaziner).

Dr. Eisenach said Washington needed to continue efforts to reform radio spectrum management, however. Changes in universal telephone service support programs were also needed, he said.

A POLICY OVERVIEW. Free State Foundation President Randy May then moderated a panel discussion, focused on current broadband policies -- and, proposed policies.

PFF Economist and leading researcher Dr. Scott Wallsten reviewed the statistics available in this area, noting that the Pew Foundation's Internet project seems to produce quite good data. Dr. Wallsten said that broadband services and development have become an important state government interest and concern. Virtually every state currently has an "e-government" effort underway, and 41 seem to have offices focusing on broadband.

Dr. Wallsten said that the United States is, in fact, devoting significant resources to broadband. The Agriculture Department's Rural Utility Service (RUS), for example, since 2001 has granted or loaned some \$3 billion to promote broadband service availability. Dr. Wallsten stressed, however, that there isn't the data currently on hand needed to support judgments regarding the cost-effectiveness of these spending and loan programs.

Ms. Helen Hall, a Verizon policy development official, briefly reviewed her company's broadband efforts -- which will involve a capital investment of up to \$17 billion this year. Verizon and other telecommunications companies initially preferred a national approach, but legislation wasn't enacted and, since 2006, considerable headway has been made at

the state level, she said. Ms. Hall pointed to the pioneering efforts of Connect Kentucky - which at least a dozen other states have studied and considered. Ms. Hall reiterated a point which Dr. Eisenach had made earlier -- namely, that the level of investment in broadband had grown rapidly after the Federal Communications Commission (FCC) reduced the level and intensity of its regulation. Less regulation clearly translates into more and faster telecommunications investment, she noted.

Vermont Public Services Board member John Burke addressed the challenges facing largely rural states, such as Vermont, especially when they're deemed "not an attractive investment" by some. He talked about the importance of Universal Service programs in rural and high-cost areas, and what states -- and, regulatory bodies -- can do to attract and promote telecommunications investment. Commissioner Burke noted that most rural residents in Vermont did not have many -- or, sometimes, any -- broadband service options, but some progress is being made.

AUDIENCE COMMENTARY. Wisconsin legislator Phil Montgomery remarked on how broadband and its promise seem to have spurred the growth of broadband "experts" and consultants, some of dubious value. He talked about the strong community interest in such services, and the economic contribution broadband can make.

Dr. Wallsten remarked that many surveys of broadband availability do not take adequately into account the satellite-based broadband services being offered by Wild Blue, as well as Hughes and DirecTV. There was also a discussion of the regulatory forbearance process at the FCC, and the controversy which some recent petitions have engendered.

A NEW WORLD. Speaking to the conference Wednesday evening was Mr. Geoff Daily, assistant editor of [KillerApp.com](http://KillerApp.com) and a popular speaker on computer and broadband services and developments.

Daily noted that broadband and its expansion have facilitated the growth of many small to

mid-sized companies, offering the public an array of new options and services. [In France, it was estimated that the deployment of the Minitel service in the 1980s caused the creation of more than 9,000 Minitel "programmers" and other computer service providers. The same appears to have occurred, here.] Mr. Daily remarked that most of the new service companies seemed to focus initially on the "early adapters," but that this was changing. He said that many of the news services are more interactive, thus systems with "more symmetrical" capability are needed.

Mr. Daily said that, based on his participation in the recent Orlando fiber-to-the-home conference, he had concluded that high capacity fiber networks are ideal. Wireless had applications, but fiber seemed best.

Mr. Daily described how fiber networks tend to facilitate interaction among user groups and communities of interest which, otherwise, rarely interrelated with one another. He also said he thought more public information, even school education on how the Internet functions would be valuable. He noted some of the recent developments in the schools, moreover, citing Hayward, California, where elementary students have undertaken to develop and distribute a community news service, and Fort Wayne, Indiana, where an educational teleconferencing network has been developed.

TELEMEDICINE: A MAJOR APPLICATION. The following morning, there was a discussion of tele-medicine and the issues it involves -- as well as the contribution it can make to better health care.

Dr. Jay Sanders, an internationally recognized telemedicine expert, talked how telecommunications soon may become the "umbilical cord of medicine." He talked about how telecommunications can not only help patients who are "rurally isolated," but facilitate better health care generally. He cited an example where the internist or family practitioner could make the equivalent of an electronic referral to a cardiologist. He discussed efforts which he had been involved in, in Georgia, where the Governor, Jones Intercable, and

many rural and small town hospitals had developed a statewide telemedicine capability.

Dr. Sanders discussed how telecommunications systems can be used for continual monitoring of patients, as well as to facilitate examination, treatment, even surgery. He talked about growing interest in telemedicine on the part of the Fortune 500 companies, which are interested both in improving the quality of care and better managing health care costs.

Following Dr. Sanders's comments, Mr. Jonathan Linkous, Executive Director of the American Telemedicine Association, briefed the conference on some of the formidable legal and regulatory hurdles facing telemedicine. There are issues of compensation and payment, for example, as well as the licensing and accreditation of personnel and health care facilities. Mr. Linkous remarked on the question of equipment standards, noting that too many of today's systems just aren't compatible. He also commented on how some requirements -- for medical grade equipment, for instance -- needed to be revisited.

Mr. Linkous remarked on how actual and potential competition with hospitals, practitioners, and other health care providers was affecting the acceptance of telemedicine. He recounted some of the problems which have arisen in conjunction with "remote radiology," said to be a major application these days.

Commenting on Dr. Sanders's remarks was Dr. Dena Puskin of the Department of Health & Human Services (HHS). Dr. Puskin agreed with Dr. Sanders that telemedicine has potential to offer better health care -- which is as important as managing costs, some in the audience added. Dr. Puskin also commented on concerns that have arisen regarding compensation for telemedicine-based services.

In response to audience queries, Dr. Puskin discussed the distinctions often drawn between health information technology (HIT) -- which tends to focus on health records --

and telemedicine applications, which are more clinical. One of the challenges with persuading the health care "provider community" to make more extensive use of these services, Dr. Puskin remarked, is their worry that the costs and investments will not produce commensurate results. In addition to competitive considerations, as Mr. Linkous mentioned, there's also just the fundamental problem of getting doctors to change how they've been practicing -- here, as in other fields, always a challenge.

A NATIONAL APPROACH NEEDED. Dr. Sanders and Mr. Linkous discussed the value, indeed, the necessity of national standards in telemedicine. They talked of how rural telemedicine models lent themselves to addressing the need of other underserved communities. In that regard, Dr. Puskin noted the extensive efforts which HHS's Office for the Advancement of Tele-Health has undertaken, over the years. Notably, all the health care professionals on the panel stressed how telemedicine could improve the quality of medical care.

SPECIAL DISCUSSANTS. Responding were Tennessee Regulatory Authority Director Ron Jones, Ms. Susan Walters -- an official of the California Emerging Technology Fund -- and Mr. Bob Atkinson of Columbia University's Center for Tele-Information.

Mr. Jones remarked that the National Governors Association has been working to alleviate licensing and related obstacles to the more widespread use of telemedicine. Ms. Walters remarked that there remained privacy concerns and perceptions -- and, that many consumers did not seem to appreciate that electronic health care records systems may be more secure than traditional paper files.

Mr. Atkinson asked what the business community's attitude toward telemedicine had been. Mr. Linkous described an initiative involving some 21 major technology companies. It was generally agreed that any lack of broadband capabilities had probably not retarded the development of telemedicine -- that is, there are other possible explanations. At the same time, all the participants agreed that more, faster, more ubiquitous broadband would

facilitate more and better telemedicine.

**BUILDING COMMUNITY NETWORKS.** Mr. Andrew McNeill of Connected Nation then chaired a discussion on broadband network development, focused, initially, on the "Connect Kentucky" experience.

McNeill discussed the effort by Connect Kentucky to improve broadband services and options in all 120 of the state's counties, including many which are very rural -- and, also economically stressed. He focused especially on the community partnership approach which has worked in Kentucky, just been adopted in Tennessee, and appears to be a model which other states are seriously considering.

Tennessee Regulatory Authority Director Pat Miller discussed in some detail Tennessee's efforts over recent years better to develop the state's broadband resources. He talked of the challenges the regulatory agency faced, trying to obtain data from the industry -- some companies simply refused to provide it, on the ground the Tennessee Regulatory Authority lacked the requisite jurisdiction. Director Miller also discussed, however, how the cooperative approach used in Kentucky eventually was embraced -- and, how that effort tied in with "e-health" and tele-education efforts that were already underway.

Mr. Steve McDaniel, a Member of the Tennessee General Assembly, discussed efforts to pass broadband -- and, cable television franchise -- reform legislation. He remarked on the major lobbying effort which both the cable television and telecommunications industry financed. McDaniel stressed, however, the importance of broadband services and choices, especially in largely rural counties faced with the loss of jobs due to international competition. Mr. McDaniel said that as a "rural legislator," he regards high-speed services as just as important as highways, education, and electricity -- when it comes to attracting and retaining jobs and growth-producing enterprises.

AT&T Vice President Joel Lubin said that there are currently about 30 million "rural" access lines, and AT&T serves about one-fourth of those lines. Rural cooperatives and phone companies -- and, AT&T -- have made a major effort to expand broadband in rural and small town markets. But if "universal broadband" is the national goal, Lubin said, the \$4 billion now earmarked to rural phone service in the USF almost certainly will be inadequate.

Mr. Rick Cimerman, Vice President of the National Cable & Telecommunications Association (NCTA), talked of how cable systems currently are providing high-speed Internet access services, in rural and small town America, too. Cimerman remarked on the competition cable faces from satellite television and, increasingly, AT&T and Verizon's video offerings. But he stressed that cable was, in fact, providing high-speed Internet access in many areas.

Harkening back to earlier comments by PFF's Dr. Wallsten, Mr. Cimerman said one of the challenges was ensuring that support targeted un-served areas, not areas which some believe are under-served because they don't have sufficient competitive alternatives. Mr. Cimerman mentioned recent changes in the RUS funding programs to concentrate on delivering services rather than additional competition.

Commissioner Burke of Vermont said he wanted to stress the possibility of real partnerships. He cited experience in his state where a Republican Governor and Democratic legislature together passed legislation to foster the build-out of broadband networks. Commissioner Burke remarked that Vermont had focused on the truly unserved areas, and had endeavored to encourage investment by reducing the cost of siting and deploying new networks.

AUDIENCE DISCUSSION AND COMMENT. There was a discussion among the panelists and the audience on issues including the wisdom of (a) one-time capital grants,

(b) designating a "chosen instrument" for remote rural areas, or (c) greatly increasing USF support for such efforts.

Notably, there was general agreement that the cooperative approach taken in Kentucky and, now, Tennessee had merit. Both AT&T and cable industry representatives indicated their continued willingness to support such cooperative efforts.

INVESTMENT COMMUNITY AND INVESTORS: SOME PERSPECTIVES. CITI's Bob Atkinson moderated a panel which reviewed the investment community's view of plans greatly to expand broadband networks, services, and competitive options.

Raymond James & Associates Vice President Frank Louthan began by noting that the overall investment attitude toward telecommunications seems better -- particularly when wireless services are involved. A few years ago, he noted, major investors were quite pessimistic -- he cited a Warren Buffett remark that telecommunications "deals " were often "too hard," because of the many regulatory complications. At present, however, that attitude appears to be changing, Louthan said.

Mr. Louthan remarked that investors were certainly aware of AT&T's U-verse and Verizon's FiOs, but did not see returns from those large investments. Investors also saw, however, strong demand for communications services as an important factor.

Kenneth Robinson, a Washington attorney and telecommunications sector investor, said that there was no typical individual investor in this sector. But one thing all of them want is stability, predictability, and no "shocks to the system" as occurred in the early 2000s, with the dot.com and WorldCom collapses.

Dr. Anna-Maria Kovacs, President of Regulatory Source Associates, said that she agreed

investors want stability, predictability, and minimal shocks to the system. But she said it's also important to realize mutual fund and other institutional investors tend to be measured on a quarter-by-quarter basis. They no longer have the luxury of investing on a three- to five-year basis.

Dr. Kovacs and Mr. Louthan both noted that heavy capital outlays tend to depress overall investment returns. Dr. Kovacs remarked how placing many regulatory burdens and obstacles on companies could tend to reduce the ability of those companies to meet regulatory goals, including more universal availability of broadband.

AUDIENCE DISCUSSION. The audience asked Mr. Louthan about the prospects for telecommunications service resellers. Louthan said that while these companies have not made much headway in residential markets, they are competitive in business "enterprise" markets, and seem likely to remain so.

There were questions regarding possible non-U.S.-based carrier investment in U.S. telecommunications markets, the effect of heavy capital investment on AT&T and Verizon shares, and the prospects for rural and small town-focused telecommunications companies.

BROADBAND, SPECTRUM, AND PUBLIC SAFETY. Ms. Nancy Victory, former Commerce Department Assistant Secretary and now leading Washington lawyer, chaired a panel which tackled public safety, disaster preparedness, and related concerns.

PFF's Dr. Scott Wallsten remarked that few seemed to appreciate the large amounts currently being spent on police, fire, and emergency medical services agencies. Dr. Wallsten also noted that, given government appropriations procedures, the individual public safety agencies often have little incentive to combine their operations, communications requirements, much less systems.

Dr. Wallsten commented that many of the inefficiencies in public safety communications are a function of the inefficiencies in how we manage the radio spectrum resource to begin with. He noted the substantial support provided in recent years by the Department of Homeland Security. But he said that, once more, there was insufficient data readily available to support benefit-cost estimates.

Mr. Chris Boyer, AT&T assistant vice president, described the extensive efforts AT&T makes to ensure it has emergency -- and, service restoration -- capabilities. According to Boyer, AT&T has invested more than \$500 million in such capabilities, ranging from "mobile recovery teams," trucks equipped with switching and generating equipment, even "fly-in containers" designed to restore Internet and data communications. Boyer remarked that AT&T undertakes to test these systems and equipment regularly, at least quarterly. Ms. Victory added that AT&T is an important member of the Department of Homeland Security's National Coordinating Council, as well as FCC and White House emergency panels.

Mr. Cimerman said that one of the challenges cable faces is ensuring "first responder" status. During the Katrina disaster, Cimerman noted, local police and emergency personnel were unaware of the fact that Cox Communications -- in addition to offering cable service -- was an important telecommunications service provider. "Don't forget about cable!" Mr. Cimerman stressed, especially as cable becomes more important as both a voice telephone and broadband service provider.

Ms. Victory said that during the Katrina disaster, only electric companies and BellSouth seemed to have easy access to many areas -- which reflects the fact that emergency personnel were not always well-informed. Since Katrina, however, steps have been taken to reduce these problems.

700 MHz. Ms. Victory then discussed the planned auction of frequencies in the 700 MHz band, many earmarked for public safety use. Ms. Victory described how the FCC had said

the successful bidder of one 10-MHz block will be required to construct a broadband public safety network. That system can be used during non-emergency conditions for other purposes -- but when an emergency is declared, presumably by the President, will be available to meet public safety needs.

Ms. Victory discussed steps which cellphone companies have taken to restore service during an emergency -- COWs, for example (cellular-on-wheels). She also said that this was an area of great interest to the FCC and other Government agencies.

WIRELESS DEVELOPMENTS. Washington attorney Michele Farquhar by teleconference reviewed the latest wireless industry developments, many of which affect the deployment of "third-generation" and other advanced services. Ms. Farquhar, a former Chief of the FCC's Wireless Telecommunications Bureau, briefly described the pending auction of frequencies in the 700 MHz band. She also mentioned the new requirement that successful bidders for certain bands "unlock" equipment.

Ms. Farquhar discussed the controversy that has arisen -- and, persisted -- over early termination charges. She described the latest E-911 requirements for wireless carriers, as well as the FCC's base station back-up power requirements. Much of the audience participation focused on the proposals to reduce early termination charges, and the fact that the substantial improvements in E-911 capabilities have not been accompanied by Federal support.

BROADBAND: CURRENT AND FUTURE TECHNOLOGIES, AND CUSTOMERS. Columbia University's Bob Atkinson moderated a discussion of broadband technologies. AT&T assistant vice president Chris Boyer described the evolution of AT&T's high-speed Internet access services, from "Project Pronto" to the current U-verse offering. Boyer noted that AT&T typically installed all-fiber networks in larger, new developments. He noted that the new AT&T networks were actually superior in terms of service restoration and "survivability."

Mr. John Horrigan of the Pew Foundation's Internet project described the results of their latest user survey. The customer universe currently breaks down into 31% "technology elite" -- young, heavy users -- and about 20% "middle of the road." But there are almost 50% of the public who have little or no regular connection with the Internet and related services.

Horrigan noted that the same people likely to make heavy use of computers and the Internet are also heavy wireless service users. He reviewed Pew's findings regarding customer satisfaction -- which seems to be rising.

Horrigan said they were surprised at the size of those who make little or no use of the Internet. In response to the audience, Horrigan also said there did not appear to be much industry interest in serving this large group. Mr. Horrigan was asked about the rise of "e-government," and indicated that the public generally likes the ability to access government services and information online.

CALIFORNIA: ITS EMERGING TECHNOLOGY FUND. Ms. Susan Walters, a senior vice president of California's Emerging Technology Fund, briefed the conference on this important effort (which grows out of funds contributed by AT&T and Verizon in conjunction with recent acquisitions in the state. A California law requires merging companies to share the efficiencies produced by any merger with their customers. In this case, the California Public Utilities Commission concluded that setting up a Fund to promote public services was desirable.)

According to Ms. Walters, the Fund has focused on three communities: Rural and small town, urban underserved, and persons with disabilities. They've made a major efforts to get groups to work together more closely, to aggregate demand. The Fund has also made a serious effort to foster more user instruction and training, to ensure the public has a better understanding of new broadband-based services and options.

Ms. Walters rehearsed the formidable challenges of fostering more and better broadband, and broadband services, in a "nation-state" the size and complexity of California. She noted that the Fund insists that communities and groups come together, and typically only makes 1:3 matching grants.

Tennessee Regulatory Authority Director Ron Jones described efforts in his state to foster more broadband service use and awareness. He noted that Tennessee's focused on both rural and small town markets and users, and on the "urban underserved." Commissioner Jack Betkowski of Connecticut described how his state had established a broadband coordinating board, and had sought to build on an existing statewide educational network.

Missouri State Senator John Griesheimer said that while gross statistics indicated 85% broadband availability there, if one excluded the three largest metropolitan areas (St. Louis, Kansas City, and Springfield) that percentage fell to barely 65%. The Senator said, however, that Missouri recently enacted video franchise reform legislation -- and, they expect to see AT&T invest some \$345 million in new plant and equipment this year.

Wisconsin Assemblyman Phil Montgomery described efforts there to foster broadband development, especially in rural and small town markets. He noted the state had offered tax credits in an effort to foster speedier build-out.

There was a discussion among the conference participants regarding some of the obstacles which broadband proponents had encountered. Perhaps most amusing was a report that the California Corrections Officers Association had initially opposed introduction of broadband-based telemedicine there, because prison guards traditionally had earned time-and-one-half transporting prisoners to and from conventional health care facilities.

GAMING AND ITS REQUIREMENTS. That evening, Verizon's expert on broadband and

gaming talked with the conference participants. Mitch Dornitch described how the gaming industry in the United States was larger than the movie business -- about \$13 billion a year -- and while it obviously attracted the "serious gamers" (men aged 18-34) it was appealing to a broader constituency as well (e.g., women, and those who see online games as "more of a diversion than a hobby").

Dornitch noted that Verizon's very high-speed FiOS network appealed especially to serious gamers, those who play highly interactive games. At the same time, Dornitch noted, Nintendo's Wii service outsold both the Microsoft Xbox 360 and Sony PlayStation 3 combined, the first seven months of 2007. Wii appeals more to "casual gamers," and does not necessary demand the "blazing speeds" preferred the hard core gamers.

There was a discussion of the economics -- and, socio-politics -- of high-speed broadband networks, designed to meet the demands of serious gamers. Some of the conference participants weren't convinced that fostering gaming is an important goal. But others noted that there are also educational games, now, as well as instructional services increasingly important to business.

**BROADBAND APPLICATIONS: SERVING NATIONAL NEEDS.** The final discussion of the conference, moderated by Washington lawyer Kenneth Robinson, focused on broadband trends, and how those reinforce various national goals.

Columbia's Bob Atkinson remarked that broadband development was plainly an important catalyst to economic development -- both within the "Information Economy" and generally. He said he was not sure, however, that the current Universal Service support mechanisms would work well -- or, cost-effectively -- when it comes to extending broadband to very remote rural and small town markets, some of which he predicted might never be served, except by satellite broadband providers.

The Pew Internet project's John Horrigan talked about how the Internet has evolved from a

means of sending e-mail messages to a system for distributing user-originated content. Today, he noted, young people regard e-mail as passé. They are focusing, instead, on YouTube, MySpace, and other applications.

Mr. Horrigan indicated that the costs to individuals -- and society -- of not participating in the Internet are probably rising. If the costs of "exclusion" are rising, he said, the 49% of the public which makes little use of the Internet is troubling.

Dr. Jeff Eisenach said that he saw little reason to assume anything in this "space" is "broken" -- and, many reasons to assume the costs of Government "solutions" would be too high. The Internet, its operation, and its evolution do not require Government "help," he said. The same is not true, however, of the current radio spectrum management system. There, he said, changes would yield important public dividends in terms of competition, more choices, and new broadband options.

Dr. Eisenach cited Clearwire, the wireless broadband service provider that now serves 39 cities -- and, which would have evolved faster, in all likelihood, had the prevailing spectrum management regime not impeded access to spectrum.

AT&T Vice President Joel Lubin remarked on a comment he and others had heard from Berkshire Hathaway's Warren Buffett -- that telecommunications was "too hard," because of the many regulatory risks and complications affecting this sector. Lubin said that addressing the problems of cost recovery -- and, the Universal Service Fund -- was necessary to foster investment. He described the challenges of the current access charges system as well.

SERVING UNSERVED AREAS, PUBLIC INVOLVEMENT. The conference participants and panelists discussed the recurrent challenge of serving rural and small town markets. Also discussed were proposals for Government ownership of broadband systems, both

wireless and, in some cases, wireline.

Some of the problems with the current Universal Service support system were discussed, such as the designating of many wireless "eligible telecommunications carriers" (ETCs). There also was a discussion of whether Government has special obligations to help people access online services. "If the Government places more and more services online, does it incur an obligation to help people access those services?" a participant asked. There also was a discussion of whether regulatory agencies should mandate the availability of certain Internet speeds, or leave such matters to industry.

CONCLUSION. Following this discussion, the 40th KMB Invitational Conference concluded. State legislators and other conference participants seemed to agree that the public-private partnership models provided by the Connect Kentucky, Connect Tennessee, and the California Emerging Technologies Fund warranted further consideration by other states interested in ensuring adequate broadband service and options.

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