

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

In the Matter of )  
 )  
Innovation in the Broadcast Television Bands: ) ET Docket No. 10-235  
Allocations, Channel Sharing and Improvements )  
to VHF )  
  
To: The Commission

**COMMENTS OF PEARL MOBILE DTV COMPANY, LLC**

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## SUMMARY

Pearl Mobile DTV Company, LLC (“Pearl”) was formed by Belo Corp., Cox Media Group, E.W. Scripps Co., Gannett Co., Inc., Hearst Television Inc., Media General Inc., Meredith Corp., Post-Newsweek Stations, Inc. and Raycom Media Inc. to make innovative use of television broadcast spectrum, including bringing mobile digital television (“Mobile DTV”) to the American public.

Pearl members are making the investment to launch Mobile DTV today. As a co-founding member of the Mobile Content Venture (“MCV”), Pearl will be part of a national launch of an innovative and integrated digital platform bringing multiple channels of high-quality Mobile DTV service to mobile and handheld devices in communities representing 40 percent of the U.S. population — *before the end of 2011*.

In short, Mobile DTV now is a reality in the United States.

The new reality of Mobile DTV will require balanced and fair spectrum management policies to thrive. The three proposals for revisions to the Commission’s spectrum policies discussed here — flexible use allocations, channel sharing, and attempts to improve VHF spectrum — must be evaluated carefully, as we describe in these comments, to ensure that these fundamental changes do not compromise the continued deployment of Mobile DTV.

The overarching public interest value of this innovative new service makes it essential that the Commission’s spectrum policies continue to permit its deployment and success. In particular, as we discuss in these comments:

- ***Americans Demand Mobile DTV.*** As demonstrated in the large-scale Washington consumer trials, users of Mobile DTV show the highest demand for live, local news. The combination of live local and national Mobile DTV programming is highly demanded across the board.
- ***Mobile DTV is a lifeline in emergencies.*** The one-to-many architecture of Mobile DTV ensures that live, lifesaving emergency information can be broadcast to millions of viewers simultaneously even as one-to-one wireless networks buckle. In the aftermath of the tragic Japanese tsunami, when cellular service was down or overwhelmed, Mobile DTV services enabled victims of the crisis to obtain access to essential information. The American public deserves the same assurance of access to critical data in times of crisis.
- ***Mobile DTV uses spectrum efficiently and intensively.*** Mobile DTV’s point-to-multipoint nature allows the public’s demand for high-bandwidth video to be met without the incremental consumption of bandwidth required by cellular architecture. Mobile DTV is an essential element of America’s broadband infrastructure that can easily and effectively be integrated into the mobile broadband environment.

Pearl urges the Commission to ensure that any change in DTV spectrum management policy does not undermine or compromise the ability of television licensees to bring to the American public the critically important public interest benefits of Mobile DTV.

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Pearl Mobile DTV Company, LLC (“Pearl”), a company founded to make innovative use of broadcast television spectrum through mobile digital television (“Mobile DTV”), welcomes this opportunity to comment on the Notice of Proposed Rulemaking (the “NPRM”) in this proceeding.

The nine television and media companies that formed Pearl — Belo Corp., Cox Media Group, E.W. Scripps Co., Gannett Co., Inc., Hearst Television Inc., Media General Inc., Meredith Corp., Post-Newsweek Stations, Inc. and Raycom Media Inc. — have joined with News Corporation, NBC Universal Media, LLC, and ION Media Networks, Inc. to form the Mobile Content Venture (“MCV”). Later this year, television stations operated by the members of MCV will launch over-the-air commercial delivery of an innovative digital platform that will provide popular local and national content on over-the-air broadcast spectrum to mobile devices in markets representing more than 40 percent of the U.S. population. Top hardware manufacturers such as Dell and Samsung already have committed to develop MCV-compatible devices, and the MobiTV technology platform will provide consumers with a sophisticated,

interactive experience.<sup>1</sup> In short, less than two years after the mandated date for transition of local television stations to all-digital transmissions, the innovation of over-the-air Mobile DTV is a reality.

Television broadcast spectrum is the essential element necessary to deliver the myriad benefits of Mobile DTV to the American public. Television stations deliver Mobile DTV using a portion of their existing digital bitstreams. Stations also offer other high-bandwidth services to the public, including high definition television (“HDTV”) and important digital multicast channels, within these digital bitstreams for delivery to over-the-air viewers, cable headends, and satellite receive facilities. The multiple, advanced services that must be delivered within a single digital bitstream make bandwidth a scarce resource for stations, and any reduction in bit capacity would severely constrain a station’s ability to provide important and highly demanded new services, including innovations such as Mobile DTV.

We file these comments to highlight the potentially serious ramifications of certain spectrum reallocation proposals to the future of Mobile DTV and its ability to provide an efficient, point-to-multipoint architecture that will permit the delivery of emergency information, local and national news, and other popular video programming to millions of viewers simultaneously.

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<sup>1</sup> MobiTV, Inc. is developer of the Accelerated Media Platform, which powers live video and VOD applications for all major U.S. wireless carriers and handset manufacturers.

**I. MOBILE DTV IS AN IMPORTANT AND INNOVATIVE NEW SERVICE THAT WARRANTS CAREFUL CONSIDERATION IN THE COMMISSION'S SPECTRUM MANAGEMENT POLICIES.**

Just as Congress, the Administration and the Commission intended, the transition to all-digital broadcasting in 2009 has allowed broadcasters to “adapt their services to meet consumer demand” with “innovative offerings.”<sup>2</sup> Among the most important of those innovations is Mobile DTV. The speed at which the industry was able to create a new digital television standard with sufficient robustness to provide high-quality digital television signals to devices in motion has been extraordinary. The broadcast community and its partners in the consumer electronics, wireless, and information technology sectors are working hard to make Mobile DTV a reality. Mobile DTV provides an important new way for broadcasters to serve their communities of license, so long as the right spectrum management policies remain in place. But the public cannot benefit from Mobile DTV if its deployment is undermined by changes in spectrum management policies that handicap our ability to provide this important new service.

*Demand for Mobile DTV is High.* With growing consumer demand for local and national television news, weather, and entertainment programming on mobile and handheld devices, the case for over-the-air Mobile DTV is strong. The results of the “Washington Consumer Showcase” trials that were conducted by the Open Mobile Video Coalition (“OMVC”) between May and November 2010 illustrate this point.<sup>3</sup> In these trials, nine local television stations in the Washington area collectively broadcast 14 free local channels and nine premium cable networks to several hundred consumers equipped with Mobile DTV-enabled

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<sup>2</sup> *Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service*, Fifth Report and Order, MM Docket No. 87-268, 12 FCC Rcd 14588, 14591-92, ¶¶ 5-7 (1997).

<sup>3</sup> OMVC is a nationwide alliance of more than 900 commercial and non-commercial broadcast television stations committed to promoting the development and deployment of Mobile DTV products and services.

devices. Over the course of these trials, the participating stations delivered more than 2,600 different videos and 33 genres of programming. Devices used in the trials included the Samsung Moment, Dell Mini 10 Inspiron Netbook, the LG Mobile Digital TV/Portable DVD Player, and a Tivizen Wi-Fi Smartphone accessory that allows consumers to watch Mobile DTV on their iPhone, iPad or iPod Touch, Blackberry with WiFi connection, and other smartphones.

Extensive market research by Harris Interactive and Rentrack Corp. demonstrated that:

- Local news was by far the most popular genre of content watched by trial participants, followed by reality programming, entertainment news, talk, situation comedies, and children's programming.
- The use of Mobile DTV in the case of emergencies and crises was important to users. One participant used Mobile DTV to obtain accurate information about a bomb threat in his workplace.
- Mobile DTV viewing was additive and complementary to traditional television viewing, and participants expressed interest in being able to watch live television "on the go."
- Participants provided with a Mobile DTV-enabled smartphone were very likely to watch Mobile DTV outside of the home, especially during breaks at work, while running errands, and as a way to entertain their children.
- One of the key differentiators for Mobile DTV, as opposed to other types of mobile video delivery, is that it permits the live distribution of local news and "must-see" entertainment and sports programming as it is happening rather than on a delayed or time-shifted basis.

The high demand revealed by the Consumer Showcase for local news and information on Mobile DTV-enabled devices is not a surprise. Mobile DTV brings together two consumer trends: the consistently high interest of the public in local news, and the centrality of mobile devices to the consumer experience in the 21st Century. Indeed, a comprehensive study by the Pew Internet & American Life Project found that local television news remains the top source of news for Americans, with particularly high interest among certain demographic groups,

such as women and African Americans.<sup>4</sup> Just under 80 percent of all Americans get some or all of their news from a local television station. The second- and third- most common sources for news are national networks and the Internet, respectively. Moreover, nearly 90 percent of people who access the Internet on their mobile devices use those devices to get news at least occasionally, and younger mobile consumers are more likely than other demographic groups to use their devices to find news and information. Mobile DTV advances these twin interests in accessing live local news and obtaining news over mobile devices.

***Mobile DTV Provides a Lifeline in Emergencies.*** In addition to serving day-to-day consumer demand for live news, entertainment, sports, and other compelling content on mobile devices, Mobile DTV can deliver lifesaving, live emergency news and alerts to consumers virtually anywhere they are, whether in their cars, on the street, at work, or – especially when power is out and conventional television viewing or even web surfing may not be an option – at home. The one-to-many architecture of Mobile DTV, which provides the same level of robust service whether one or 1,000,000 viewers are receiving the signal, is uniquely suitable for emergency information. Even when cellular networks are down or overly congested (as also is common in times of emergency), Mobile DTV can provide the lifeline, using over-the-air spectrum to deliver reports on evacuation routes, road closures, severe weather alerts, and other essential information for coping with a natural or manmade disaster. In all of these cases, consumers will have access to this lifesaving service via the very same handheld and portable devices that they use every day.

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<sup>4</sup> See Pew Research Center, *Understanding the Participatory News Consumer: How Internet and Cell Phone Users Have Turned News Into A Social Experience* (March 1, 2010); see also Pew Research Center’s Project for Excellence in Journalism, *State of the News Media 2011, Local TV: Good News After the Fall* (2011) (noting that in 2010, “the overall audience for local TV news actually held steady and new delivery platforms, including mobile, raised hope for the future”).

The tragic earthquake and resulting tsunami in Japan underscored the importance of the lifeline that Mobile DTV provides in emergencies. As Chester Dawson, senior reporter in Tokyo for the *Wall Street Journal*, reported, “Unable to use cell phones, many used their [mobile television-enabled] smartphones to tune into television broadcasts and find out what had happened.”<sup>5</sup> A mobile user in Tokyo explained to Mr. Dawson: “It’s very convenient being able to watch live TV when the phones are down. Otherwise, we’d have no idea what is going on.”<sup>6</sup>

***Mobile DTV Intensively Uses Television Broadcast Spectrum.*** Because of the nationwide aggregate subscription rates assumed for multichannel video programming distributors (“MVPDs”), some have claimed that only 10 percent of households use spectrum to receive the content of their local television stations, while 90 percent receive that content via MVPDs. The implication is that broadcast spectrum is not intensively used because only 10 percent of the public needs it to obtain television signals.

Even if this figure were accurate,<sup>7</sup> it will shortly become irrelevant. *All* users of Mobile DTV use over-the-air spectrum to receive live local television station content. Before the end of 2011, the “90/10 fallacy” will be obsolete for markets representing 40 percent of the American population, in which local mobile viewers will receive multiple channels of Mobile DTV on broadcast spectrum through the MCV service. And broadcasters can provide this highly efficient service entirely within existing DTV allocations, without obtaining any additional

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<sup>5</sup> Posting of Charles Dawson, Senior Reporter, Wall St. J. to <http://blogs.wsj.com/japanrealtime/2011/03/11/live-blog-japan-earthquake/tab/liveblog/> (March 11, 2011, 3:06 am ET).

<sup>6</sup> *Id.*

<sup>7</sup> See, e.g., R. Gaitonde, “Media Access Panel Debates Spectrum Auctions,” *Broadband Breakfast* <http://broadbandbreakfast.com/2011/03/media-access-project-debates-spectrum-auctions/> (March 14, 2011) (estimate of broadcaster Jim Goodmon that 30 percent of Americans use spectrum to receive television broadcasts). The “90/10 fallacy” overgeneralizes by ignoring the immense geographic variation in MVPD penetration around the United States (in which some communities may have less than 50 percent penetration), as well as ignoring the widespread use of over-the-air reception for second receivers that are unconnected to wired systems.

spectrum. The addition of Mobile DTV to reach subscribers on the go, as part of the complement of digital services being provided in a television licensee's bitstream, is an extraordinarily intensive, efficient and locally responsive use of spectrum.

***Mobile DTV Is The Most Spectrum-Efficient Way To Distribute Popular Video***

***Content.*** Mobile DTV provides a spectrally efficient means of helping to meet the demand for high-bandwidth content and services on mobile devices. Unlike a one-to-one unicast service that consumes additional incremental bandwidth for every additional consumer who streams or downloads video, Mobile DTV uses a one-to-many broadcast architecture to deliver multiple streams of video and interactive services to handheld and other mobile devices. This one-to-many architecture means that thousands of consumers can tune in to the same video stream at any given moment. And every minute that a video is watched on Mobile DTV is one less minute of data-intensive streaming or downloads on mobile devices. While there presumably will remain an important role for unicast platforms in delivering "long tail" video content that would not typically be of interest to a larger audience, Mobile DTV can play an essential role in easing congestion on 3G (and soon 4G) wireless networks that otherwise become degraded when a popular program is streamed or downloaded by thousands or even millions of consumers on a point-to-point basis. Mobile DTV provides an essential complement to mobile broadband networks, and will play a key part in reducing their need for additional spectrum. The Commission should ensure that its spectrum management policy for the broadcast bands does not inhibit widespread deployment of Mobile DTV.

***Mobile DTV Can Easily be Integrated into the Mobile Broadband Environment.***

Although Mobile DTV delivers unique services to mobile consumers (*e.g.*, live local programming), it also can be seamlessly integrated into the converged media environment that

consumers expect on their mobile and handheld devices. The Mobile DTV transmission standard developed by the Advanced Television Systems Committee (“ATSC”), known as ATSC M/H, supports integration with a diverse range of services, including “push” video on demand (“VOD”), in which certain programs are downloaded automatically to the device for later viewing; “pull” VOD, in which the device’s WiFi or 3G/4G connection is used to download programming of the consumer’s choosing; time-shifted viewing; interactive services to “rate” and otherwise interact with content; e-commerce; and advanced emergency alerting. MCV already is preparing to take advantage of the versatility of the ATSC M/H standard – partnering with MobiTV to offer consumer applications including a sophisticated program guide and interface.

**II. THE COMMISSION’S CONCLUSIONS MUST ENSURE THAT THE PUBLIC CONTINUES TO GAIN THE FULL BENEFIT OF MOBILE DTV.**

The broadcasting and consumer electronics industries cooperatively developed Mobile DTV based upon the spectrum management policies that the Commission established for the transition to digital television, which was completed less than two years ago. Based on these efforts, Mobile DTV is a reality and the television broadcasting industry is poised to make it available to millions of Americans. Accordingly, the *NPRM*’s three proposals for revision to the Commission’s DTV spectrum policies – flexible use allocations, channel sharing, and attempts to improve VHF reception – should be evaluated carefully for the effects they may have on the deployment of Mobile DTV.

*Flexible use allocations.* The *NPRM* proposes to revise the U.S. Table of Frequency Allocations to add flexible use allocations for fixed and mobile services on a co-primary basis with DTV broadcast services, including Mobile DTV. By itself, the mere addition of a new co-primary allocation has no effect – positive or negative – on the receipt of existing

services deployed in a band. Of considerably greater significance, and potential concern, are the steps that may be taken *after* a new, co-primary allocation is adopted for the broadcast bands. Interference standards to protect the Nation's universally available television broadcast service should be established *before* new services are deployed in the television bands, not after. In particular, the NPRM appears to envision a later "repacking" of broadcast spectrum into a band smaller than the already reduced, "core" DTV allocation to which broadcasters relocated in June 2009. Pearl opposes any forced repacking of the broadcast spectrum or a reduction in service-area coverage or interference protection.

As was revealed during the Broadcast Engineering Forum on June 25, 2010, a repacking of the stations broadcasting on 120 MHz of spectrum (as proposed by the National Broadband Plan) would leave well over 350 DTV stations without any spectrum assignment. Moreover, inevitable reductions in DTV service areas from increases in interference and power reductions would severely limit the number of consumers able to receive Mobile DTV on their smartphones and other mobile devices. Areas that lose DTV coverage will produce unserved portions of broadcasters' communities of license, and they will be "dead zones" for consumers of Mobile DTV service. The prospect of coverage loss is particularly troubling given that *100 percent* of consumers using Mobile DTV will be relying directly upon the DTV signal to receive the service. Put simply, a forced repacking of DTV stations into a smaller broadcast band would constrain broadcasters in their ability to compete in the mobile broadband marketplace. This is precisely the outcome that the Commission for so many years has fought to prevent: the use of heavy-handed regulatory intervention to pick winners and losers in the marketplace.

***Channel Sharing.*** Pearl does not necessarily oppose the *NPRM's* proposal to allow two or more stations to share a 6 MHz channel, provided that the decision to share

channels is genuinely voluntary. Channel sharing is voluntary if it is the result of an agreement independently and privately entered into by participating stations, in which the decision to engage in the agreement is wholly independent of any government action. If, for example, a new spectrum fee were to be imposed on broadcasters who do not enter into a channel sharing arrangement, the resulting channel sharing would not be genuinely voluntary. Before proceeding with rules that would allow channel sharing, the Commission must define with precision what is meant by “voluntary” channel sharing and make clear that stations will in no way be coerced to enter into such arrangements.

The Commission also should be up front with stakeholders in the Nation’s broadcasting service – including Congress, the Executive Branch, individual stations, and consumers – that channel sharing will constrain participating stations in their ability to offer the mix of services that the transition to all-digital broadcasting otherwise has made possible. For example, it will not be possible for a station sharing one-half of a standard 6 MHz channel to offer an HD stream *and* Mobile DTV, and it may not be possible for two stations to fit even two HD streams (without any additional services) into a single 19.4 Mbps bitstream. As the National Broadband Plan recognizes, “Television stations will need to consider their desire to multicast additional video streams, such as digital side channels and mobile DTV streams, relative to the possible sharing of channels.”<sup>8</sup> Without question, channel sharing takes away bandwidth that could otherwise be used to provide highly demanded Mobile DTV services. The inevitability of this result should not be minimized or whitewashed in the context of any government move to permit channel sharing.

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<sup>8</sup> See *Connecting America: The National Broadband Plan*, § 5.8.5 (Mar. 16, 2010).

*Attempts to Improve VHF Television Service.* In principle, efforts to improve reception of DTV signals transmitted over VHF spectrum assignments are laudable and should be pursued regardless of spectrum reallocation considerations. The raising of these efforts in connection with a potential, forced repacking of DTV stations, however, triggers many concerns. As was discussed in the Broadcast Engineering Forum, the laws of physics and other unavoidable factors may constrain widespread use of the low VHF band for Mobile DTV. Services deployed over VHF spectrum, particularly low VHF spectrum, are more susceptible to interference from undesired signals and other “noise.” Moreover, VHF antennas may need to be considerably larger than the embedded (and thus invisible to the consumer) antennas standard in the mobile handheld marketplace.<sup>9</sup> Thus, while Pearl supports efforts to improve reception of broadcast signals in the VHF bands, under no circumstances should a station providing (or intending to provide) Mobile DTV be involuntarily repacked to a VHF channel. The Commission likewise should not proceed with any spectrum management policy that presumes greater use of the VHF bands for digital broadcasting, even if only on a voluntary basis, unless and until changes to digital low-band VHF transmissions are conclusively demonstrated to be effective in practice for both fixed receivers and Mobile DTV service.

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<sup>9</sup> See Doug Lung, *NAB FASTROAD Announces VHF Mobile DTV Antenna Progress*, TVTechnology (Feb. 3, 2011).

## CONCLUSION

So long as balanced spectrum management policies remain in place in the television broadcast bands, Mobile DTV services – including those to be deployed by Pearl – will use existing digital spectrum assignments to provide live local and national programming and services to millions of portable wireless devices. In addition to serving demonstrated consumer demand for live local and national content, Mobile DTV’s point-to-multipoint delivery of popular video content to mobile devices can be a lifeline in emergencies and significantly relieve congestion on wireless 3G and 4G networks. At the same time, the flexibility of the ATSC M/H standard ensures that Mobile DTV can be integrated seamlessly with the myriad other services available in the mobile broadband ecosystem.

In light of the public interest benefits afforded by Mobile DTV to our communities of license, we urge the Commission to decline to take any steps that would diminish or compromise broadcasters’ ability to provide the American public with the critically important and complementary Mobile DTV service.

Respectfully submitted,



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