Before the Federal Communications Commission Washington, D.C. 20554

In the Matter of)	
Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act))))))))	GN Docket No. 09-137
A National Broadband Plan for Our Future)	GN Docket No. 09-51
International Comparison and Survey Requirements in the Broadband Data Improvement Act)	GN Docket No. 09-47

COMMENTS OF FREE PRESS - NBP Public Notice #13

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COMMENTS OF FREE PRESS - NBP Public Notice # 13

Free Press respectfully submits these reply comments in response to the Notice of Inquiry, DA 09-2217, GN Docket Nos. 09-137, 09-51, 09-47 ("NBP Public Notice # 13"), released October 14, 2009 by the Federal Communications Commission ("FCC" or Commission"), which sought comment on the Draft Study "Next Generation Connectivity: A Review of Broadband Internet Transitions and Policy from Around the World," produced by the Berkman Center for Internet & Society at Harvard University ("Berkman study" or "draft study").

For brevity, our topline answers to the six questions posed in the public notice are below. Further explanation is provided in the subsequent text.

Q1. Does the study accomplish its intended purposes?

A1: Yes. The draft study comprehensively reviews other countries' experiences in their transition from narrow to broadband Internet connectivity. The draft study relies on a broad array of data and analytical approaches to gleam lessons and meaning from the experiences of various countries.

Q2. Does the study provide a complete and objective survey of the subject matter?

A2: Yes. The draft study appears to be objective, and on the issues of central importance, is certainly comprehensive.

Q3. How accurately and comprehensively does the study summarize the broadband experiences of other countries?

A3: The draft study appears to have taken reasonable care to accurately and comprehensively summarize and analyze the broadband experiences of other countries. However, even within our own experience here in the U.S., reasonable parties will never agree on the characterization of some these experiences, especially those relating to regulation. Thus, we certainly expect parties located in some of the individual countries examined (e.g. the regulated incumbents or their supported analysts) will take issue with the draft study's treatment of this topic.

Q4. How much weight should the Commission give to this study as it develops a National Broadband Plan?

A4: The Commission should give substantial weight to a central theme stemming from the draft study's analysis -- that the U.S. is a middle-of-the road performer on a number of high-speed Internet market metrics. The Commission should also give substantial weight to the draft study's analysis of the general national policy frameworks that were or were not successful in certain countries examined. While we expect

incumbents and representatives from the organizations they support financially will quibble with the draft study's conclusions regarding so-called "open access" policy, we believe the Commission has enough compelling evidence through this draft study and other data to clearly demonstrate that <u>competition</u> in the U.S. broadband market is sub-optimal. Whether open access policy or some other policy is appropriate to address this sub-optimal competition perhaps deserves further debate and study.

Q5. Are additional studies needed along the lines of the Berkman study?

A5: See answer A4.

Q6. Please provide any other comments on the Berkman study that you deem relevant.

A6: See below.

I. THE DRAFT BERKMAN STUDY IS A COMPREHENSIVE, WIDE-RANGING AND IN-DEPTH INTERNATIONAL BROADBAND MARKET COMPARISON STUDY

Comparing the high-speed Internet market experiences of different countries is no easy task, and has been the subject of many filings before the Commission over the past decade. While the July 14th press release¹ is somewhat vague, we understand the overarching purpose of the Berkman study was to cut through the cluttered debate that often surrounds this issue, particularly the debate centering on data published by the Organization for Economic Cooperation and Development (OECD).² In fulfilling this purpose, the draft Berkman study does a remarkable job of culling together various data

¹ "Harvard's Berkman Center to Conduct Independent Review of Broadband Studies to Assist FCC," FCC News Release, July 14, 2009.

² For a listing of the most common critiques of the OECD data, and rebuttals to said critiques, *See* Comments of Free Press, In the Matter of *A National Broadband Plan for Our Future*, GN Docket No. 09-51, pp. 33-38 ("*Free Press NBP Comments*"); also fn 32-36.

sources (among those OECD and non-OECD sources), and independently benchmarking the broadband market performance of various countries of interest.

The study begins with a useful investigation of what exactly is meant by "broadband" in the context of national policies. This investigation produces two non-mutually exclusive definitions that receive differing emphasis in the various national plans and policy frameworks: 1) high-capacity networks, and 2) ubiquitous connectivity. The draft study also indicates that many countries policy frameworks do include an element of universal service, focusing on enabling universal access (but not necessarily adoption) of so-called "first-generation" broadband services, while also promoting greater availability of so-called "next-generation" capabilities.

In this respect, the draft study's broad approach should be non-controversial, and indeed, not at all surprising. The entire motivation behind the National Broadband Plan effort mandated by Congress is to "ensure that all people of the United States have access to broadband capability," by requiring the Commission to produce an "analysis of the most effective and efficient mechanisms for ensuring broadband access by all..." The draft Berkman study simply produces a wide basket of benchmarks for segmenting country outcomes into "exemplary" and "cautionary," then proceeds to analyze individual country approaches to identify -- internationally -- which are the "most effective and efficient mechanisms" used previously to promote wider deployment and adoption of high-capacity networks and ubiquitous network connectivity.

The draft study uses a "multidimensional approach to benchmarking," which strengthens, and sometimes complicates, the analysis. From this benchmarking approach,

³ American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).

the draft study produces a conclusion that we believe is non-controversial: the U.S. is a "middle-of-the-pack performer on most first generation broadband measures." As millions of American's understand, we pay far too much for far too little compared to citizens in several other nations. This is a fact confirmed exhaustively by the draft study that cannot be credibly disputed.

Of course, what is the subject of considerable dispute and debate are the underlying causes for these observed differences. We discuss the draft study's core conclusion below, but urge the Commission to retain one key fact as it decides how to incorporate Berkman's work into the National Broadband Plan -- the U.S. retail high-speed Internet access market is without any doubt a duopoly.⁴ The countries that are outperforming the U.S. according to numerous outcome benchmarks all have broadband markets that are notably more competitive than the U.S. market (for example the incumbent cable and telephone companies in the United Kingdom have only a 50 percent share of the broadband market).⁵ Why or how those countries have more competitive

⁴ See *Free Press NBP Comments*, Figure 6, showing that incumbent phone and incumbent cable companies (who are monopolies in their respective mediums) control 97 percent of the fixed residential high-speed Internet access market, and 95 percent of the entire (fixed and mobile) high-speed Internet access market.

See Comments of Time Warner Telecom, GN Docket No. 07-45, May 16, 2007, Appendix A (Sheba Chacko, "UK: Investment, Innovation and Competition Enabled by Regulation," BT Presentation, April 2007, Washington D.C). This arrangement has led to early and accelerated deployment of advanced VDSL technologies by these competitive carriers, offering users speeds in excess of 24Mbps. In turn, this competitive deployment appears to have encouraged BT to finally offer its own VDSL2+ services. See *June 2008 OECD Data* (showing 24Mbps DSL services, but only 8Mbps DSL services available from BT); *See also* "BT Rolls Out Faster Broadband", *BBC News*, April 30, 2008, available at http://news.bbc.co.uk/2/hi/technology/7376173.stm. According to the latest FCC data, nearly two-thirds of all residential and business DSL lines in the United States had downstream speeds of less than 2.5Mbps. *See* "High-Speed Services for Internet Access as of December 31, 2007," Industry Analysis and Technology Division, Wireline

markets than the U.S. is a question that needs to be asked and answered (the draft Berkman study does that), and this answer may or may not be relevant for U.S. policymakers.

The law (both the 1996 Act and the Recovery Act) envisions lofty goals and outcomes, and adopts the belief that competition is key to achieving those outcomes. We The Commission has the duty to bring American consumers a market of agree. meaningful competition, and it should pursue whatever policies it believes will deliver this outcome. But it is not simply enough for the Commission to say, "we want competition" and do nothing to assess or promote it. As we outlined in our initial comments in the National Broadband Plan NOI, the U.S. since 2001 has pursued a strategy of promoting facilities-based competition in place of access-based regulations (and certainly in place of retail price regulation). This approach has been nothing but a miserable failure for American consumers and the American economy, leaving untold billions in lost surplus sitting on the table, and shifting consumer surplus to the pockets of the comfortable duopolists. The Commission may ultimately reject the policy lessons from the draft Berkman study -- if for no other reason other than pragmatics.⁶ But this does not mean the Commission can disregard the larger lesson that this and mountains of other data show -- that it must zealously pursue the outcome of meaningful competition, and if that goal fails to materialize, that it alone is responsible for the unjust enrichment of the entrenched duopolists at the expense of millions of hard-working consumers.

Competition Bureau, Federal Communications Commission, Table 5 (*December 2007 FCC Form 477 Data*).

⁶ As the lessons from the implementation of the 1996 Act teach us, *any* regulation opposed by deep-pocketed incumbents will be litigated in the courts, and shifting political winds could lead to such regulations being abandoned before they are even adequately implemented. Thus, in the cynics view, "what's the point of even trying?"

II. EARLY CRITIQUES FAIL TO DIMINISH THE OVERALL INFORMATIVE POWER OF THE DRAFT BERKMAN STUDY

Though preliminary, the early critiques of the draft Berkman study seem to come from three perspectives: 1) that the study is flawed because it uses data from the OECD; 2) that the study failed to acknowledge other empirical and analytical work on the unbundling regulatory framework; and 3) that the econometric analysis contained within part 4 are flawed. We address each of these below. While some of the critiques do appear to have some merit, we think that overall, the draft study remains very informative, and that a final study which addresses the *legitimate* critiques will be all the more powerful.

One of the early critiques of the draft Berkman study came from the incumbent cable and telecom-supported blogger George Ou.⁷ Ou's critique is largely that the Berkman study used data from the OECD, which is inherently suspect. If the study had relied solely on a single source of data, this critique might be valid. But it did not. As stated in a reply by the lead author of the draft study, "[w]e used our own independent analysis as well as OECD data and other sources where those seemed better. 2) We tested and validated the OECD data where we did use it, and found that it was substantially better than the critics would have you believe." The specific critiques offered by Ou beyond this general one are on largely irrelevant matters, and are also accounted for by the draft study. For example, Ou critiques the study's approach to counting wireless

⁷ George Ou, "Flawed data in Berkman broadband study," *DigitalSociety.org*, October 19, 2009. This organization is supported by Arts+Labs, which is in turn supported by AT&T and Verizon. Prior to working at Digital Society, Mr. Ou worked for the Information Technology and Innovation Foundation, which is funded by incumbent cable and telecommunications firms.

⁸ Commenting on the Berkman Center's broadband study for the FCC, *Berkman Center for Internet & Society*, Harvard University, November 04, 2009.

hotspots. But as noted by Berkman, "we have offered are three different sources, from different times, coupled with a narrative effort to explain the differences. We explain why, of all these, we prefer the measure we chose, but mostly emphasize how important it is, going forward, to develop better measures. We give hotspots very little weight in our overall measure for penetration because of these limitations. Most importantly from the perspective of Ou's concerns, for purposes of looking at US performance, our hotspot measure reflects relatively well on the US. If we excluded the hotspots data, the US would drop two spots, behind Austria and Spain, to 19th on penetration, although the overall multidimensional ranking would not be affected." Furthermore, we note, from the directives established by the Recovery Act, and from the point of view of competitive choice, we're not sure why \$9.99 per day Wifi access from a local coffee shop should be considered a plus at all.

Ou has a similar critique about Berkman's use and presentation of advertised and actual speeds, as well as latency data. While we have our own concerns about *over-reliance* on data from single sources like Speedtest.net, the Berkman study acknowledges the shortcomings in each individual source, and proceeds to bolster the interpretations through the use of multi-dimensional analysis. This process provides some useful information that withstands the generic concerns expressed by Ou.

Ou's last critique aimed at the Berkman study (though it really is a more relevant critique of the OECD's data) is that the pricing data is "arbitrary and demonstrably inaccurate." But here, it appears Ou did not actually take the time to read and understand the Berkman study, because on pricing -- more than any other metric -- Berkman took

great effort to provide some meaningful, multi-dimensional information and analysis. As stated by Berkman, "we spent a tremendous amount of time and effort both learning from and refining the OECD pricing data, and created an entirely new pricing study based on a completely independent market data source, the GlobalComms database, which we studied independently. We constructed a dataset of nearly 1000 discrete formal offerings drawing on these two independent datasets: the OECD and GlobalComms. We then carried out analysis on these data both separately and together." Berkman approaches the OECD pricing data with an abundance of caution, and proceeded to produce pricing data on 8 different dimensions.

While Ou's critique was based on what the draft study did (use OECD data), the second early critique largely appears to be based on a perceived omission -- a full review of existing literature on the impacts of unbundling policy. While it is certainly true that the draft study did not offer a full review of every paper published on the general topic of unbundling, it did acknowledge key research that is most relevant to the market at hand -- high-speed Internet access. Much of the earlier work deals more with access policies on

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⁹ See e.g. Ibid., noting, "Ou complains that we did not take account of datacaps. This criticism suggests a simple failure to read our methods. We explicitly take account of datacaps in our pricing study, and we explained how and why in the pricing study itself. These are not in fact as widespread as Ou claims they are, though they do appear in countries whose price performance is lower. We corrected for the fact that a low bitcap really suggests a different product, or possibly higher actual prices when overage fees are accounted for, by excluding price offerings below 2Gb per month, because that is what Comcast publicly stated was the median monthly usage of its customers. To clarify: we excluded from our study prices for offers that limited their users to data caps below what a median Comcast user uses in the US."

¹⁰ See e.g. the comments filed in the instant proceeding by the incumbent-funded Free State Foundation, or the comments filed by the New Zealand incumbent-funded New Zealand Institute for the Study of Competition and Regulation Inc.

the old POTS network, and are not completely relevant to the current debate.¹¹ Other papers cited as ignored were papers commissioned by incumbents and authored by groups that whose sole purpose is to produce research that discourages the use of regulation.¹² Does this work, even though it is tainted by its source of funding, deserve consideration on its merits alone? Of course. But we can hardly fault Berkman for using its limited time wisely by focusing on the studies conducted by the less conflicted sources. Simply put, it was not Berkman's commission to review every piece of industry empirical propaganda, and it should not be faulted for not doing so.

Finally, the industry-funded (and often flip-flopping)¹³ Phoenix Center published a critique of the draft study's econometric modeling contained in the appendix to chapter 4.¹⁴ The headline of this critique is that Berkman's econometric show the opposite of its conclusions. But even Phoenix recognizes this conclusion is not "real", but the result of the interpretation of the data if it is interpreted through the lens of a supply and demand model. While we can't claim to speak for Berkman, and we plan to address this

¹¹ See e.g. New Zealand Institute Comments, at note 13.

¹² See e.g. the papers cited by Free State Foundation authored by the Progress and Freedom Foundation, or the papers cited by New Zealand Institute authored by itself or those authored by the Technology Policy Institute. The New Zealand Institute is funded by that country's incumbent teleco, and the Progress and Freedom Foundation (PFF) and the Technology Policy Institute (TPI) are heavily funded by incumbent U.S. cable and telecom firms. TPI is itself a spin-off of PFF, with the founding senior staff of TPI all coming directly from PFF.

¹³ Phoenix is notorious for its stunning reversal of opinion on telecom policy, a flip-flop that just happened to coincide with the change in views of its major industry benefactors following the 2005 mergers of AT&T with SBC and of Verizon with MCI. Prior to this change, the Center produced empirical research supporting the use of open access and network neutrality policies -- but after AT&T went from a CLEC to an ILEC, the Center's research started to reach dramatically different conclusions. See http://www.savetheinternet.com/blog/09/10/30/telco-funded-phoenix-center-flip-flops-net-neutrality.

¹⁴ George S. Ford, PhD, "Whoops! Berkman Study Shows "Open Access" Reduces Broadband Consumption," *Phoenix Center Perspective*, November 12, 2009.

empirical critique more fully in a future filing, we suspect that Berkman was not choosing to construct a supply and demand model like that used by OECD economist John de Ridder, but instead using de Ridder's data to construct a single-equation model where price is treated as exogenous -- just as Phoenix Center did in a prior paper. Phoenix Center is of course correct that if the model is specified as a 2-equation supply and demand model, that the equations must be solved simultaneously -- but we believe this error and the subsequent problems with the sign on price in the supply equation lies with de Ridder, and not necessarily with Berkman's analysis.

Indeed, one of our concerns (also expressed by Berkman) with attempting to model the impact of access policy on per capita subscription is that the impact of competition policies will be directed almost completely through price, and that price and subscription are jointly determined.¹⁷

¹⁵ See, e.g., G. S. Ford, T. M. Koutsky and L. J. Spiwak, "The Broadband Performance Index: A Policy-Relevant Method of Comparing Broadban Adoption Among Countries," PHOENIX CENTER POLICY PAPER NO. 29, July 2007.

Though in de Ridder's paper he seems to acknowledge this issue, "[c]omparing Table 6 with Table 4 on the supply side, the price variable is again incorrectly signed suggesting that the observed relationship between broadband penetration and price is tracing-out the demand curve." de Ridder's model is apparently flawed, but we were able to flip the sign on the price variable in the supply model simply by using a different set of instruments than that used by de Ridder. We are not suggesting this is a correct specification either, merely that the model, if estimated using 2SLS, is very sensitive to the instruments used.

¹⁷ In their *Policy Paper #29*, Phoenix Center chooses to not model the policy variables, and says that they are left to the disturbance term (and then constructs and index based on this disturbance term -- this is somewhat confusing, given that if a model is correctly specified (i.e. no omitted variables or measurement error) the disturbance in the error is supposed to be completely random). Phoenix does rightly acknowledge the possible endogeneity of price in their model, though no tests for endogeneity in their model such as a Durbin–Wu–Hausman test are reported (but such a test is reported for the 2SLS evaluation of de Ridder's model). The equation for price in Phoenix's 2SLS model (in *Policy Paper #29*) does not include a policy variable as an instrument. We think this might be an interesting question to ask, given the critique of de Ridder and Berkman's econometric approach. We constructed a 2SLS model that modeled penetration as a

Phoenix's second critique, that Berkman's correcting of de Ridder's variable for time-since unbundling was implemented is an example of researcher bias. We have a different interpretation. In correcting de Ridder's "GUYRS" variable, Berkman appears to be trying to overcome the inaccuracy inherent in simply looking to see if a country has access policy on the books; that is, Berkman appeared to be trying to create a variable that accounted for the actual implementation of unbundling policy, not the mere existence of it. Did Berkman get it completely right? Perhaps in most cases, perhaps not in others. For example, Phoenix rightly critiques Berkman for giving the U.S. a value of zero for the "GUYRS" variable, as the U.S. does still have a local loop unbundling policy régime in place.

But this speaks to a larger matter, one also raised by the Phoenix Center. We believe that the implementation of access policies (be they full loop unbundling, subloop unbundling, linesharing or bitstream accesss) is so complex and so distinctive across each country, that it may be futile to attempt to model this and learn anything meaningful using econometrics. Here Phoenix Center seems to agree, stating, "[t]he idiosyncrasies of unbundling regimes suggest (to me at least) that there is no proper econometric

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function of income, age, education and price (natural log), with the price equation instrumented with an open access dummy variable, percent urban population, and the share of the dominant technology. The dummy policy variable is statistically significant (and negative) in the price equation, and the price instrument is significant and negative in the penetration equation (However, a Hausman test for endogeneity indicates that the price variable is exogenous). We report this here in these comments not because we think we have found the "right" model, or that this tells us anything about the casual effect of "open access" generically defined. We report it to merely suggest, that following the critiques laid out by Phoenix Center, that an explanatory model can be constructed to support the theory that access policies are associated with lower prices, and that lower prices are associate with increased broadband penetration. Though as we discuss above, due to their complex nature, econometric modeling of access policies may be a fool's errand.

specification of an empirical model aimed to test the broad effects of unbundling in an international setting. The set of variables required to accurately capture the nature of an unbundling regime are too numerous to specify in an econometric model of international outcomes, and some relevant factors are likely to be collinear with a country's fixed effect. Put simply, it is impossible to accurately measure the broad impacts of unbundling regimes in an international context using regression analysis." And this is why the Commission can choose to dismiss the econometric analysis contained in section 4.10, yet still embrace (if it chooses) the draft studies overarching conclusions. This is because the econometric data was not very influential in the draft study's own conclusions. Indeed, in three separate places the study notes this:

"We consider the qualitative method we use throughout most of this part more appropriate for the complex underlying phenomena than purely econometric techniques, given the small number of countries and observation points." (page 75)

"We treat the econometric analysis as a useful adjunct to the qualitative analysis, rather than a replacement, because any analysis of such a small set of observations of questions of such great complexity and nuance, taking one measure of policy and one measure of performance, will of necessity overlook important factors." (page 80)

"We are cautious about the results of such analyses because of the small number of countries, the small number of observations, the thin specification of the variables, and the potential interaction effects among these variables, as well as other unobserved variables." (page 115)

One of the core findings of the draft study is "that "open access" policies—unbundling, bitstream access, collocation requirements, wholesaling, and/or functional separation—are almost universally understood as having played a core role in the first generation transition to broadband in most of the high performing countries; that they now play a core role in planning for the next generation transition; and that the positive

impact of such policies is strongly supported by the evidence of the first generation broadband transition." Our reading of the draft study seems to indicate that Berkman arrived at these conclusions based on their multidimensional approach, and that the econometrics (those reported both by Berkman, and the work conducted by the numerous authors cited within the draft study) factored minimally if at all in the final analysis. What influenced the conclusions of the draft study are the country-by-country, firm-by-firm analysis, and in this endeavor we believe Berkman's work is of high quality.

The Commission should give the critiques of the econometrics their due weight (and perhaps withhold final judgment until Berkman issues its final report), but in the end we strongly suggest that the econometrics, even if unassailable, should in turn be given much less weight in the final analysis than the qualitative analysis of country performance.

III. CONCLUSION - IN SETTING A NATIONAL BROADBAND POLICY, THE COMMISSION MUST PROMOTE MEANINGFUL COMPETITION, AND PROTECT CONSUMERS FROM DUOPOLY MARKET HARMS

We commend the Berkman Center for its work. The draft study represents a substantial contribution to the field of comparative international broadband market analysis, and we look forward to the delivery of the final study. Though the draft study's obvious, yet somehow controversial, observation that the U.S. is a middle-of-the-pack performer will surely raise the ire of industry and their paid henchmen, we are confident that the Commission will find much value in the study.

Whether or not the Commission gives credence to the draft study's conclusions about open access policy may be of little practical importance. Much of the deregulatory policy agenda put in motion under the Powell-Martin era Commission is somewhat of a Pandora's Box/Genie-in-a-bottle -- that is, getting the 1996 Act back on track would

require the leadership at the Commission expend a near-infinite amount of political

capital, and do battle with entrenched incumbent interests on the Hill, in the courts and in

the court of public opinion. We are under no illusions that this, or any Commission would

actually pursue open access regulations, or any regulations that come to terms with the

indisputable fact that American consumers are getting the short end of the duopoly stick.

We are however somewhat hopeful that at the very least, this Commission won't "set it

and forget it"18 like the Powell and Martin Commissions did; that is to say, we are

hopeful that if this Commission competition policy is rooted in intermodal competition,

that it will actually do something to promote it -- something more than leaving it to the

entrenched duopolists to take care of.

The data in the draft study and elsewhere in this docket clearly demonstrates that

the U.S. market lacks adequate competition in current-generation high-speed Internet

access services, and that for a large portion of the country next-generation services are

likely to be a cable DOCSIS 3.0 natural monopoly. This should be a top concern for this

Commission. Open access policy may or may not be the right or even feasible answer for

America. But doing nothing is not the right answer either.

Respectfully submitted,

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By:_/s/____

S. Derek Turner

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¹⁸ This was the title of a Phoenix Center Policy Paper, authored when the group was funded by CLEC interests and supported open access regulations. *See* George Ford and Lawrence J. Spiwak, "Set It and Forget It? Market Power and the Consequences of Premature Deregulation in Telecommunications Markets," PHOENIX CENTER POLICY PAPER NO. 18, July 2003.

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Dated: November 16, 2009