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December 31, 2009

VIA ELECTRONIC FILING

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

**Re: Written *Ex Parte* Communication, NBP Public Notice #21
Data Portability and Its Relationship to Broadband
GN Docket Nos. 09-47, 09-51, 09-137**

Dear Ms. Dortch:

Pursuant to Section 1.1206 of the Commission's rules, Microsoft Corporation ("Microsoft") submits this letter and the attached documents, each of which is relevant to the Commission's exploration of the benefits and challenges associated with cloud computing. This filing builds upon Microsoft's prior *ex parte* presentations on cloud computing and related issues, such as network security, submitted for the Commission's consideration as it develops a National Broadband Plan,¹ and is relevant also to NBP Public Notice #21, "Data Portability and Its Relationship to Broadband."²

As reflected in the attached papers, we are entering a new era of computing — commonly known as "cloud computing" — in which software running on a user's own PC or an organization's on-site computers is increasingly augmented by computing delivered as a service over the Internet. One of the inherent values of this new

¹ See, e.g., *ex parte* notices submitted in the above-referenced proceedings by Microsoft on Nov. 2, 2009 (describing a "World Health Organization" model for network security), at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020244363>; Nov. 3, 2009 (attaching article by Scott Charney, Corporate Vice President, Trustworthy Computing, Microsoft on "Establishing End to End Trust"), at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020244433>; Nov. 9, 2009 (reporting on oral *ex parte* presentation in which Craig Mundie, Chief Research and Strategy Officer, Microsoft discussed Internet security issues), at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020347286>; Nov. 12, 2009 (reporting on oral *ex parte* presentation in which Microsoft representatives discussed the role of cloud computing in government and attaching Microsoft paper on "Privacy in the Cloud Computing Era"), at <http://fjallfoss.fcc.gov/ecfs/document/view?id=7020348098>.

² *Comment Sought on Data Portability and Its Relationship to Broadband*, NBP Public Notice # 21, DA 09-2433 (rel. Nov. 18, 2009).

era is that it has the potential to provide businesses, governments, and other users with greater flexibility and choice in their computing options. Put simply, there is no one-size-fits-all model of cloud computing; rather, the benefit of cloud computing is that users can receive a menu of options enabling them to rely on a cloud service provider for as little or as much of their computing needs as is appropriate to the users' situations — ranging from a model in which the cloud service provider is responsible for virtually all of a user's computing needs (including the provision of applications, data storage, and the operating system) to a model in which most of the computing occurs at the user's premises but the service provider is available for extra computing power and storage in times of peak demand. Microsoft believes strongly that consumers, businesses, and governments will benefit from this added choice and flexibility, and accordingly has made significant investments to provide a range of seamless "client-plus-cloud" solutions that combine the power of software applications with advances in hardware and Internet-based services.

Microsoft also recognizes that relocating data from on-site servers to remote datacenters raises security and privacy considerations for all users, from individuals to governments. Indeed, in a recent global survey, by a 5-to-1 ratio IT professionals and executives reported that they "trust existing internal systems over cloud-based systems due to fear about security threats and loss of control of data and systems."³ For users to make informed decisions about the right computing models and deployments to fit their needs — and for the benefits of cloud computing, in turn, to be fully realized — users must be able to evaluate and understand how the different models will protect the security and privacy of their data and systems.

Accordingly, in addition to exploring the benefits that arise from unprecedented flexibility and choice in computing, the attached papers explore a critical challenge in the new era of computing: ensuring that cloud computing is a trustworthy option for users.

Microsoft appreciates this opportunity to provide the Commission with additional information on cloud computing and its role in the evolving broadband ecosystem. Please do not hesitate to contact the undersigned should you have any questions about this information or the topics covered therein.

Respectfully submitted,

/s/ Paula Boyd

Paula Boyd
Regulatory Counsel for Microsoft Corp.

Enclosures

³ News Release, *Global Study: Cloud Computing Provides Real Business Benefits, But Fear of Security and Control Slowing Adoption*, Avanade Inc. (Feb. 24, 2009), at

<http://www.avanade.com/uploaded/pdf/pressrelease/uscloudsurveyreleasefinal053414.pdf>.