EXHIBIT

Microsoft hereby requests Special Temporary Authority to support its efforts to restore communications capability in areas of Puerto Rico and the United States Virgin Islands affected by hurricanes Irma and Maria. This amendment adds the United States Virgin Islands as an additional area of operation, and requests authorization to operate white-space devices by manually determining and selecting a permissible channel of operation using a certified white-space database not less than once every 24 hours, rather than doing so by accessing a white-space database over the Internet to determine available channels when the over-the-Internet method is not possible.

TV white spaces is an ideal technology for connecting communities in Puerto Rico that currently lack sufficient communications capabilities in the wake of these natural disasters. Microsoft's intention is to operate TV white space radios on channels authorized for use across Puerto Rico supporting the recovery efforts of Net Hope, Claro, and others. In these same areas, many broadcast television operators are currently off the air due to the effects of these storms, but channel availability and power limits remain restricted for white-spaces operations on or adjacent to these channels. Microsoft seeks authorization, when permitted by the applicable broadcast licensee, to operate on these temporarily unused channels, or operate on adjacent channels subject to greater power limits and other rules that would apply if the first-adjacent channel were not occupied by a broadcast licensee. Microsoft would only operate on these channels or at these elevated power levels with the affirmative consent of the relevant broadcasters, in coordination with each potentially affected broadcaster, and will return to ordinary operations under the Commission's rules when informed that the broadcaster has resumed operations.

Antenna Information

	Adaptrum Log Periodic	**Adaptrum FP-1P (Full Panel)**
Polarization	Vertical	Vertical
Gain	11dBi	11±1dBi
Half-Power Beam Width (E Plane)	50 degrees	30±6 degrees
Half-Power Beam Width (H Plane)	65 degrees	90±8 degrees