



# THE FREE STATE FOUNDATION

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***Perspectives from FSF Scholars***  
***April 28, 2017***  
***Vol. 12, No. 15***

**Now Is the Time for MOBILE NOW**

by

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**Introduction and Summary**

With Congress now back in session, the time is now for passage of the MOBILE NOW Act. MOBILE NOW is bipartisan legislation that recognizes the importance of the availability of spectrum to the future of next generation 5G deployment and to meeting burgeoning consumer demand for a wide variety of wireless services, including all that falls within the “Internet of Things.” Wireless services have been, and are forecast to continue to be, a boon to the economy, producing impressive consumer welfare benefits. Advances in high-speed wireless services have been driven by American innovation and infrastructure building. Thus, the MOBILE NOW Act fits neatly within the Trump Administration’s infrastructure plans that promote American investment. Given all these positive benefits for America, prompt passage of MOBILE NOW just makes common sense.

On January 3, 2017, Senator Thune (R-SD), Chairman, and Senator Nelson (D-FL), Ranking Minority Member, Senate Commerce, Science, and Transportation Committee, reintroduced bipartisan legislation, the MOBILE NOW Act, [S. 19](#). Among other things, MOBILE NOW would mandate that the Administration would improve in its efforts to repurpose government spectrum to wireless broadband use. It also asks the government to identify ways of incentivizing

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government to free up more spectrum and improve the speed with which government allows commercial wireless to use federal lands.

Nevertheless, MOBILE NOW does need further improvement. First, it only requires NTIA to study what types of incentives government might need to free up spectrum, without enacting any specific incentives. Second, it gives the federal government 270 days to process siting applications on federal lands, while the FCC has required local governments to complete review of most applications in 90 days. Third, it has not made a decision on balancing the amount of licensed and unlicensed spectrum. Despite these shortcomings, the MOBILE NOW legislation still reflects a significant bipartisan effort that is a clear bright spot in congressional relations.

The House Communications and Technology Subcommittee of the Energy and Commerce Committee held an April 4, 2017, [hearing](#) exploring the need for mobile broadband spectrum. Chairman Marsha Blackburn (R-KY) at the hearing promised to marshal House support for legislation similar to MOBILE NOW. There appeared to be no real dissent on moving forward toward the goal of finding more spectrum for mobile broadband use. Holding hearings in advance of the Senate consideration of MOBILE NOW shows a leadership commitment by Chairman Blackburn to advance spectrum legislation in this session of Congress.

It is also encouraging that there has been a fresh infusion of political capital in the Trump Administration in support of more spectrum. Added wireless spectrum appears to be in tune with President Trump's stated interest in substantially enhancing American infrastructure investment. Secretary of Commerce Wilbur Ross at his January 18 confirmation hearing before the Senate Commerce Committee [stated](#) that the government needs to take additional steps to ensure that the government uses spectrum more efficiently.

MOBILE NOW is a timely "kick in the pants" to government to fulfill the Obama Administration's declared plan to repurpose 500 MHz of government spectrum to commercial wireless broadband use. Government efforts lagged in the waning days of the Obama Administration, through an overemphasis on private-government spectrum sharing and delays in moving forward with expected reallocation of government-controlled spectrum. With the problematic, limited allocation of the 3.5 GHz band, and the 70 MHz of usable spectrum reallocated in the TV broadcasting incentive auction, it is time that government redouble its efforts to meet the original 500 MHz goal as well as meeting more updated forecasts of demand for more spectrum that will be necessary to deliver advanced 5G wireless and other consumer wireless services.

Congress is to be congratulated for its renewed and urgent focus on locating additional spectrum for advanced 5G use. NOW is the time for MOBILE NOW to be enacted into law.

### **The MOBILE NOW Act**

On January 3, 2017, Senator Thune (R-SD), Chairman, and Senator Nelson (D-FL), Ranking Minority Member, Senate Commerce, Science, and Transportation Committee, reintroduced bipartisan legislation, the MOBILE NOW Act, [S. 19](#), that would:

- Mandate that at least 255 MHz of spectrum below 6 GHz be allocated for wireless mobile and fixed broadband use no later than December 31, 2020, in line with the Obama Administration's 2010 500 MHz allocation goal;
- Require a feasibility study for reallocating six specified bands above 24 GHz, and an FCC NPRM proposing reallocation of such bands where warranted within two years of enactment;
- Require government to conduct a feasibility study for commercial-government sharing of spectrum between 3.1 and 3.5 GHz and between 3.7 and 4.2 GHz;
- Facilitate speedy deployment of communications infrastructure on federal property;
- Require NTIA to report recommendations to Congress that would provide incentives to federal agencies to relinquish or share the spectrum they use;
- Require NTIA to study bidirectional sharing that would permit government to gain flexible access to commercial spectrum on a shared basis; and
- Require the FCC to adopt rules permitting unlicensed mobile use of spectrum in guard bands.

The Senate Commerce Committee unanimously voted to approve MOBILE NOW on March 3, and Chairman Thune was actively seeking prompt passage by the full Senate prior to the Easter break. Although other important issues are pending before Congress, MOBILE NOW promotes infrastructure development, American jobs, and other economic benefits in line with major Trump Administration priorities and should be promptly enacted. Despite these benefits, there are a number of ways this legislation can be further improved before adoption.

*Government Incentives.* It has been reported that originally in 2016 a MOBILE NOW draft provision, since removed, would have permitted a government agency to share up to 25 percent of auction proceeds for spectrum it relinquished. Such a proposal, a modified incentive auction approach made by FCC Commissioner Jessica Rosenworcel and which I evaluated favorably [here](#), would be one way to give government real motivation to give up spectrum. MOBILE NOW's bidirectional sharing proposal may have some impact on convincing an agency to give up some of its spectrum, but I have my doubts given endemic government hand-wringing and potential operational problems of such an approach.

In addition, an early draft of MOBILE NOW apparently would have mandated that NTIA assess whether agencies were utilizing up-to-date technology and assigning an economic opportunity cost to government spectrum. But that provision hit the cutting room floor as well. To be fair, the legislation does require the Administration to study and make recommendations to Congress regarding improving government incentives to relinquish spectrum. But since there are no actual mandated measurable achievement markers, I fear that there will be insufficient movement on the incentive issue. Providing a more material incentive, such as allowing an agency to share in a significant portion of auction proceeds as in the broadcaster incentive auction, assigning opportunity cost values to government spectrum, or using other effective management techniques, would better encourage government to use spectrum more efficiently.

*Infrastructure Process Improvements.* MOBILE NOW also apparently eliminated a 90-day deadline for federal agencies to grant applications seeking infrastructure access to government lands, and replaced it with a 270-day deadline. A 90-day deadline would parallel existing FCC actions that enforce strict deadlines on local zoning authorities that review wireless infrastructure applications. It is regrettable that the federal government might receive favored treatment in accommodating wireless infrastructure applications over their local counterparts. Inserting a 90-day deadline would provide more certainty to applicants attempting to expand wireless infrastructure.

*Licensed v. Unlicensed Spectrum.* Some parties have complained that MOBILE NOW short-changes unlicensed mobile use in favor of dedicated, licensed spectrum. MOBILE NOW's provision seeking more unlicensed use in guard band spectrum is apparently insufficient to satisfy these parties. There is no question that a careful balance needs to be achieved between licensed and unlicensed use. Both types of wireless spectrum are critical to meeting consumer and business demand for 5G. Only actual allocations and rules will create such a balance, however, and there is enough flexibility in the proposed Act to accommodate such a balance. So this critique should be listed in the wait-and-see category.

Regardless of the need for certain improvements identified above, the MOBILE NOW legislation still reflects a significant bipartisan effort that is a clear bright spot in congressional relations. Since only the federal government has control over allocation and spectrum use decisions for a significant portion of available spectrum, achieving meaningful consensus may be the only way to produce substantial benefits for American consumers and businesses.

I applaud Senators Thune and Nelson for their dogged bipartisan efforts to speed up the process of spectrum reallocation usable for advanced 5G networks. Some of the MOBILE NOW provisions represent a needed improvement to the overly cautious approach of the [2015 Spectrum Pipeline Act](#) adopted as part of the 2015 Omnibus Budget Bill, which I described [here](#). It is good news that the Senate is moving forward toward making MOBILE NOW a reality.

### **House of Representatives Spectrum Reallocation Interest**

The Senate's movement on spectrum legislation has sparked interest in the House of Representatives as well. The House Communications and Technology Subcommittee of the Energy & Commerce Committee held an April 4, 2017, [hearing](#) exploring the need for mobile broadband spectrum. Chairman Marsha Blackburn (R-KY) at the hearing promised to marshal House support for legislation similar to MOBILE NOW. Although this hearing was marred by off-subject partisan bickering on broadband privacy, there appeared to be no real dissent on moving forward toward finding more spectrum for mobile broadband use.

In addition, Representatives Brett Guthrie (R-KY) and Doris Matsui (D-CA) re-introduced [H.R. 1888](#) on April 4, 2017, which would provide financial incentives to government for relinquishing spectrum. Although setting aside one percent of auction proceeds for the agency relinquishing spectrum is inadequate to provide a sufficient "incentive," it is a start. An "incentive auction" for government spectrum contributors akin to the incentive auction just conducted, coupled with

relocation guarantees, could go along way to evict government from inefficiently “squatting” on existing spectrum.

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### Administration Political Support for More Spectrum

It is encouraging that there has also been a fresh infusion of political capital in the Trump Administration in support of more spectrum. Added wireless spectrum appears to be in tune with President Trump’s stated interest in substantially enhancing American infrastructure investment. Secretary of Commerce Ross at his January 18 confirmation hearing before the Senate Commerce Committee [stated](#) that the government needs to take additional steps to ensure that the government uses spectrum more efficiently and that sufficient spectrum is allocated for commercial wireless systems. Secretary Ross displayed a detailed knowledge of government spectrum use, the need for more commercial mobile wireless spectrum, and the difficulties of prying underutilized spectrum from government users. He opined that the government needs to be provided with incentives to give up spectrum where it is not needed or is used inefficiently. He recognized how important broadband deployment is to overall infrastructure development.

Most certainly, all these efforts are moving forward from a base provided by the Obama Administration’s plan to reallocate 500 MHz of spectrum for private mobile wireless broadband use. And the Wheeler FCC commendably took strides to reallocate and repurpose some spectrum in efforts to move towards achievement of the goal. But as Free State Foundation President Randolph May and I said [here](#), regrettably these efforts lagged in the waning days of the Obama Administration, through an overemphasis on private-government spectrum sharing and delays in moving forward with expected reallocation of government-controlled spectrum. In this piece we included NTIA’s own chart of spectrum reallocation progress, which I reproduce below for easy reference, and found it made questionable representations.

<b>Table 1—Federal, Non-Federal, and Shared Spectrum Bands Under Investigation</b>				
<i>Frequency Band</i>	<i>Spectrum Made Available (megahertz)</i>	<i>Spectrum Identified and In Process (megahertz)</i>	<i>Spectrum Identified and Under Study (megahertz)</i>	<i>Spectrum for Potential Future Study (megahertz)</i>
Wireless Communications Service (WCS): 2305-2320 and 2345-2360 MHz	30			
H Block: 1915-1920 and 1995-2000 MHz	10			
Advanced Wireless Services AWS-4: 2000-2020 and 2180-2200 MHz	40			
AWS-3: 1695-1710, 1755-1780, and 2155-2180 MHz	65			

3.5 GHz Citizens Broadband Radio Service (CBRS): 3550-3650 MHz	100			
UHF TV Incentive Auction: 512-698 MHz		42-126		
1675-1680 MHz			5	
2020-2025 MHz			5	
5 GHz Unlicensed National Information Infrastructure (U-NII) U-NII-2B: 5350-5470 MHz			120	
5 GHz U-NII-4: 5850-5925 MHz			75	
1300-1390 MHz				90
1680-1695 MHz				15
2700-2900 MHz				200
2900-3100 MHz				200
3100-3550 MHz				450
<b>Totals</b>	<b>245</b>	<b>42-126</b>	<b>205</b>	<b>955</b>

NTIA, Sixth Interim Progress Report on the Ten-Year Plan and Timetable (June 2016).

Based on NTIA’s relocation chart, the government had only successfully reallocated about 145 MHz of spectrum by the end of calendar year 2015. The 100 MHz of 3.5 GHz spectrum, identified by NTIA in the “mission accomplished” column, is fraught with problematic conditions. That spectrum has not yet been auctioned and its permitted power level is too low and licenses are of too short a duration (up to three years without a renewal expectancy) to be reliably usable for the mobile broadband networks that most consumers need, a point which CTIA [highlighted](#). And, as NTIA [reported](#), significant carve-outs exist in some portions of this band in geographic areas where government users will permanently be present and protected from interference, mostly along the U.S. coasts where a large percentage of Americans live and work. However, recently both Chairman Pai and Commissioner O’Rielly informally have indicated that they might entertain some changes to the 3.5 GHz licensing scheme. Given the lack of detail, it is too soon to evaluate any benefits contemplated. Notwithstanding, modifications that increase the usefulness of the band for mobile broadband would be an encouraging boon to 5G infrastructure deployment.

The 600 MHz band incentive auction to repurpose over-the-air TV spectrum for mobile broadband use is now complete and the auction winners were [announced mid-April](#). Therefore, we now know that 70 MHz of usable spectrum will be available after a transition period, which appears in NTIA’s “in process” column. Although the results of this auction are important, the lower-than-anticipated spectrum valuations achieved, along with the significant restrictions imposed on the “reserve spectrum” portion of this auctioned spectrum, raise questions regarding the actual deployment of this spectrum.

Even crediting these two additional bands, the government has still only achieved 315 MHz of spectrum, a distant 185 MHz away from the previous Administration’s 500 MHz goal. At the current time it is unclear how the remaining gap is going to be closed. The November 2016

NTIA Quantitative Assessments of Spectrum Usage was quite gloomy, failing to indicate a clear path to the goal line.

Returning to the NTIA achievements chart, there are some 245 MHz of spectrum listed in NTIA's "under study" column, including 120 MHz of U-NII-2B & 4 band spectrum that the FCC has been considering exclusively for shared unlicensed use since 2012, but the agency has not yet evaluated potential interference studies associated with sharing these U-NII bands with government spectrum holders and other users. The identified 75 MHz of 5.9 GHz spectrum listed as "under study" is still subject to much debate. There is no indication when any of the "under study" bands may be freed up in the future. I have hope that New Secretary Ross can turn the gloomy evaluation scenario toward a brighter future for the American consumer.

### **Pending FCC Action**

It is true that last summer the Federal Communications Commission [allocated](#) some additional 11 GHz of spectrum for mobile broadband use in its *Spectrum Frontiers* proceeding. In that proceeding, the FCC allocated 7 GHz of spectrum for unlicensed use, and 3.85 GHz for dedicated use. The FCC rightfully was not satisfied with these efforts and therefore issued a *Further Notice of Proposed Rulemaking* (FNPRM) identifying additional millimeter-wave spectrum for potential reallocation. The FNPRM identified another 18 GHz of spectrum in eight high-frequency bands for 5G. Although these high-band blocks are very necessary to the 5G effort, there remains the issue of locating sub-6 GHz spectrum that was the focus of the Obama Administration's 500 MHz allocation plan.

Those further millimeter wave allocations remain under consideration by the current FCC. Enactment of MOBILE NOW legislation can give this process an added boost. More recent actions intended to explore ways to streamline access and permitting processes for both wireline and wireless communications are commendable. These actions can also produce significant benefits boosting 5G infrastructure investment. The new FCC direction under Chairman Pai's leadership, that places more emphasis on promotion of investment opportunities, is key to 5G's future.

### **Conclusion**

Senator Thune has sought hotline treatment of MOBILE NOW in the Senate. A bold move along these lines is required not only for advancement of infrastructure development, but also for promotion of uniquely American investment growth opportunities. Bipartisan action will promote massive consumer welfare benefits. The time is NOW for adoption of MOBILE NOW both by the Senate and the House.

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