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**AT&T's 3G Sunset Will Make Way for Speedy 5G Services:
Technology Transitions Shouldn't Be Delayed by Special Pleading**

by

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The FCC is considering a petition by the alarm industry to delay AT&T's sunset of its 3G network by agency fiat. If the petition were to be granted, it effectively would bar AT&T from using 10 MHz of its licensed spectrum nationwide for 5G services in 2022. The Commission doesn't have legal authority to do that. But even if it did, the agency should refuse to grant the petition. The Commission should not relegate mobile wireless services to the slow-speed era and diminish the benefits of 5G for consumers.

Ensuring 3G wireless networks are retired on schedule is a technology transition issue that is bigger than any one provider or category of business customers. My August 23 [*Perspectives from FSF Scholars*](#) addressed the importance of T-Mobile's planned retirement of its 3G network in early 2022. Similarly important is the scheduled retirement of AT&T's 3G network in early 2022 – which was announced three years ahead of time and was not a surprise. Old 3G networks consume significant amounts of spectrum for a small and fast-shrinking user base. That valuable spectrum needs to be repurposed to timely roll out 5G networks, whether they are T-Mobile's, AT&T's, or another entities, so that consumers can benefit from their promised speeds and capabilities.

According to the petition filed at the FCC on May 10 of this year by the Alarm Industry Communications Committee (AICC), there were nearly 6 million 3G cellular devices installed and used in homes and businesses for wireless alarm services, including for fire and personal emergency response systems. And about 60% of those devices used AT&T's 3G network, while the remaining 40% used Verizon's 3G network. (It's almost certain that there are fewer such 3G devices in use now.) The alarm industry is seeking government intervention to push back AT&T's retirement of its 3G Universal Mobile Telecommunications Service (UMTS) network from February 2022 to year's end 2022.

The FCC lacks statutory authority to forestall the sunset of 3G networks, and that should make AICC's petition an open-and-shut matter. AT&T's 3G UMTS service offerings to alarm businesses are private carriage Internet of Things (IoT) data services. They are *not* offered on a mass market retail basis to consumers, but rather generally are offered through individually negotiated contracts with business customers. Contrary to the alarm industry's position, these services are not commercial mobile services subject to common carrier restrictions. AT&T's IoT mobile data services do not interconnect with the public switched telephone network.

Consequently, the Commission has no hook for requiring a slowdown on the retirement of 3G networks under Sections 201, 202, 214 or elsewhere in Title II of the Communications Act. Whereas the Commission arguably could claim wider authority under different sections of the Communications Act in overseeing the digital television (DTV) transition and the sunset of analog wireless services, the agency's authority over AT&T's mobile IoT data services to its business enterprise customers is sharply limited. Indeed, Section 332(c)(2) *prohibits* common carrier regulation of private mobile services.

Leaving aside the FCC's lack of authority over the matter, any government attempt to stall 3G network retirement would be bad policy. Simply put, delaying 3G network sunset means delaying 5G deployment and foregoing the economic and other opportunities made possible by 5G's advanced capabilities. Like other old 3G networks, UMTS is much slower, far less capacious, and a lot less reliable than 4G LTE and 5G networks. The speed capabilities of UMTS networks are reportedly in the 384 Kbps to 2 Mbps range. According to OpenSignal's [5G User Report](#), as of July 21, AT&T's average 5G download speeds already exceed 52 Mbps, a figure that apparently includes AT&T's use of dynamic spectrum sharing (DSS) for 5G services on its 4G LTE network. In May of this year, RootMetrics [reportedly](#) found download speeds of about 1 Gbps for AT&T Plus, a 5G service offering using mmWave spectrum. And once AT&T's spectrum currently allocated for 3G is combined with C-Band spectrum for 5G use, its network speeds are expected to rise sharply.

Any government-imposed delay on 3G retirement would severely impede wireless providers' ability to put their licensed spectrum to its highest and best use. To keep 3G network operations going requires that wireless providers dedicate an outsize amount of valuable spectrum to serving a small and dwindling number of customers. Over time, as 3G users drop off the old networks and upgrade to new ones, the spectral inefficiency of continued 3G operations grows dramatically. Continued operation of AT&T's UMTS network requires that it dedicate 10 MHz of 850 MHz band licensed spectrum to that purpose. Apparently, 3G services in that 10 MHz block use less than 4% of its capacity. Thus, delaying 3G network sunset would further increase

spectral inefficiencies and result in lost economic opportunities for wireless providers and customers who would have benefitted from spectrum being timely repurposed for 5G.

AT&T plans to combine its 10 MHz of spectrum now in use for 3G with another 10 MHz block already in use for 5G. And it intends to pair that combined 20 MHz with 80 MHz of licensed C-Band (3.7 GHz) spectrum for which it paid over \$23 billion at auction. By the end of 2023, AT&T expects to cover 200 million Americans with its C-Band-enabled 5G services. Any FCC-imposed delay on sunseting 3G networks would thus thwart wireless provider plans to ramp up nationwide 5G services and similarly thwart the investment-backed expectations of successful bid winners of the C-Band spectrum licenses. Such a delay also would mar the good work of the Commission in timely conducting the C-Band auction and facilitating that spectrum's repurposing for 5G.

Moreover, prospective sunset of 3G networks was widely expected even before AT&T announced in February 2019 that it would sunset its UMTS network in February 2022. The inevitable retirement of 3G networks operated by AT&T, Sprint, T-Mobile, and Verizon has been a subject of trade press reports going back to at least [2012](#). Additionally, AT&T's public comments filed in opposition to AICC's petition cite several statements by alarm industry executives indicating that their businesses' transitions to next-generation mobile networks are on track. For example, transcripts of earnings calls for the alarm company ADT, Inc., held in February and May of this year include statements by their executives that ADT's 3G radio conversions are on schedule. Also, Alarm.com's CEO reportedly stated in both August 2020 and August 2021 that sales visits and installations have been strong because more consumers are spending more time at home on account of the COVID pandemic. Thus, the alarm industry has had ample opportunity to make preparations and upgrade to next-gen mobile wireless network-compatible alarm devices.

Indeed, the alarm industry is comprised of sophisticated businesses that have the financial resources and marketplace know-how to look after their interests. As mentioned earlier, alarm businesses typically negotiated at arms-length with AT&T for 3G IoT mobile data service contract terms. These sophisticated businesses could have negotiated for specific advance notice requirements for 3G network sunset. Or they could have contracted for other terms to allocate costs for foreseeable as well as unforeseeable risks involved in migrating to next-gen mobile wireless networks. Otherwise, all alarm companies and wireless providers should be expected to bear their own costs related to the sunset of the 3G networks. Furthermore, there is no good reason why wireless providers should bear *other* businesses' COVID pandemic-related costs that were incurred a year or more after those businesses received advance notice of future 3G sunset.

The FCC should not use its legal authority to shift the operating costs of one group of businesses onto other businesses. Particularly where the Commission has no legal authority to step in, the agency should not intervene in business disputes and effectively re-write contract terms by restricting a wireless provider's right to decide when to shut down its network in order to accommodate another business's financial interests. In fact, by its petition to forestall AT&T's 3G UMTS network sunset, the alarm industry appears to be repeating its attempt to forestall the sunset of analog wireless networks. Back in 2002, the alarm industry beseeched the Commission to intervene in the market by ordering an indefinite extension for analog wireless network

services. At that time, the Commission rightly recognized that a government-imposed restriction on analog network sunset would be financially burdensome on wireless providers, impede spectral efficiency, and intrude on a business decision that ought to be made by market providers. Those same factors weigh strongly against mandates to extend the 3G networks of any wireless provider.

When government holds back new generations of technologies, it significantly increases the costs on market providers that are compelled to operate obsolete technologies. It also deprives consumers of the benefits of superior service capabilities. The FCC's policy should be to promote transitions to next-generation networks that will better serve more consumers and enhance U.S. leadership in 5G.

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Further Readings

Seth L. Cooper, "[T-Mobile's Timely 3G Sunset Will Spur Stronger 5G Services: Early 2022 CDMA Network Retirement Shouldn't Be Slowed](#)," *Perspectives from FSF Scholars*, Vol. 16, No. 45 (August 23, 2021)

Seth L. Cooper, "[Wireless Infrastructure Reforms Rest on Solid Constitutional Foundations: Congress Should Preempt Local Obstacles to 5G Deployment](#)," *Perspectives from FSF Scholars*, Vol. 16, No. 29 (June 8, 2021).

Randolph J. May and Seth L. Cooper, "[California's Net Neutrality Law Threatens Veterans' Telehealth](#)," *Perspectives from FSF Scholars*, Vol. 16, No. 15 (March 30, 2021).

Seth L. Cooper, "[The FCC Should Promote Timely Transitions to Next-Gen Broadband Networks](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 63 (December 1, 2020).

Seth L. Cooper, "[Court Affirms T-Mobile/Sprint Merger Will Speed 5G Deployment: California PUC Should Act Without Further Delay](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 10 (March 4, 2020).

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Randolph J. May, "[Relentless Competition Defines Wireless Space, So Regulate Very Lightly](#)," *Perspectives from FSF Scholars*, Vol. 15, No. 1 (January 9, 2020).