Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Wireline Competition Bureau Seeks Comment on Emergency Connectivity Fund for Educational Connections and Devices to Address the Homework Gap During the Pandemic	)	WC Docket No. 21-93

COMMENTS OF SAMSUNG ELECTRONICS AMERICA, INC.

Samsung Electronics America, Inc. ("Samsung") submits these comments in response to the above-captioned *Public Notice* ("*Notice*")[1] seeking public input on the Emergency Connectivity Fund for educational connections and devices to address the Homework Gap during the coronavirus ("COVID-19") pandemic. As a leader in cutting-edge educational technology and solutions, Samsung welcomes this opportunity to support the efforts of the Federal Communications Commission ("Commission") to develop rules that efficiently and effectively help schools and libraries provide devices and connectivity to students, school staff, and library patrons consistent with the statutory directives in the American Rescue Plan.[2]

When schools across the country shifted to remote classes in response to the COVID-19 pandemic, many students and educators turned to Samsung devices to stay connected and engaged in the virtual classroom. Samsung has long focused on enhancing digital learning, and as part of this effort has helped thousands of schools integrate technology and devices to deliver

[1] *Wireline Competition Bureau Seeks Comment on Emergency Connectivity Fund for Educational Connections and Devices to Address the Homework Gap During the Pandemic*, WC Docket No. 21-93, Public Notice, DA 21-317 (WCB 2021) ("*Notice*").

[2] H.R. 1319, 117th Cong., tit. VII, § 7402 (2021).

powerful digital learning experiences, both inside the classroom and at home. Through these initiatives, Samsung understands how the right technology can boost engagement, inspire participation, and improve learning outcomes in all environments.

The American Rescue Plan recognizes the critical role of devices in meeting the remote learning challenges posed by the COVID-19 pandemic. The statute requires that support provided through the Emergency Connectivity Fund be used for connectivity or eligible equipment, which is defined as, among other equipment, "connected devices."[3] The American Rescue Plan defines connected devices in turn as laptops, tablet computers, and "similar end-user device[s]."[4]

In implementing these statutory provisions, the *Notice* rightfully proposes to limit the eligibility of such "connected devices" to only include devices that are "able to support video conferencing platforms and other software necessary to ensure full participation in remote learning activities."[5] Yet, the *Notice* also presumes that mobile phones "do not sufficiently allow students, school staff, and library patrons to meaningfully participate in remote learning activities and thus do not qualify as 'similar' devices under [the] American Rescue Plan" and thus proposes a blanket exclusion of phones from the eligible connected device category.[6] Samsung urges the Commission to reconsider this proposal.

[3] *Id.* § 7402(d)(6) ("The term 'eligible equipment' means the following: (A) Wi-Fi hotspots. (B) Modems. (C) Routers. (D) Devices that combine a modem and router. (E) Connected devices.").

[4] *Id.* § 3312(d)(3) ("The term 'connected device' means a laptop computer, tablet computer, or similar end-user device that is capable of connecting to advanced telecommunications and information services.").

[5] *Notice* at 5-6.

[6] *Id.*

Smartphones equipped with the right system capabilities can enable the type of full participation in remote learning activities that the Commission seeks to realize through awarding support for connected devices. Samsung's Desktop eXperience ("DeX") is a one such platform that supports full participation in remote learning activities.[7] DeX has been built into all Samsung Galaxy S and Note devices since 2018 and can be utilized at no additional cost to students, school staff, and library patrons.[8] This is the case for the following reasons.

First, DeX-enabled smartphones allow students and teachers to connect their device display to larger screens (*i.e.*, a computer monitor or a TV) more conducive to remote learning.[9] Notably, larger screens enable students to fully engage in video conferencing applications—for example by seeing their peers in the teleconference setting and viewing screenshared documents posted by teachers or classmates.

Second, DeX-enabled devices can connect to peripherals that enhance learning activities.[10] Using either multiport adapters or Bluetooth, users can pair hardware such as a keyboard and mouse, allowing virtually all of the usual schoolwork tasks one can perform on a laptop and providing for a laptop-like experience to users familiar with the PC interface. Moreover, DeX supports many of the most convenient features of these peripherals, such as

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[7] Samsung Insights, *Studying from home without a laptop? Try Samsung DeX*, Mar. 27, 2020, https://insights.samsung.com/2020/03/27/studying-from-home-with-your-smartphone, attached as Appendix A.

[8] Samsung also offers students and educators discounts on Samsung products that are used in educational contexts. Samsung, *Welcome to Samsung's Education Discount Program*, https://www.samsung.com/us/shop/discount-program/education (last visited Apr. 2, 2021).

[9] Connections are established either wirelessly to smart TVs and Miracast-capable displays or through wired connections to any HDMI or USB-C compatible monitor or TV. All Samsung smartphones can connect to displays for screen mirroring, but only DeX-enabled smartphones produce a PC-like interface on the external display.

[10] Users can also navigate DeX by using their phone as a touchpad if a keyboard and mouse are not available.

standard keyboard shortcuts and right-click for context menus. And when an assignment calls for paper and ink, these mobile devices support printing using Wi-Fi Direct.

Third, DeX supports many of the most common educational applications. Third-party apps supported by DeX with a laptop-like experience include popular video conferencing platforms such as BlueJeans, Skype, and Zoom, the Microsoft Office suite, Google Docs, Adobe Acrobat Reader, Photoshop Lightroom, Photoshop Sketch, Gmail, and Chrome—and each performs the same way on the DeX-enabled smartphone as it would on a laptop.[11] Users can also work simultaneously on up to five applications at one time, allowing students to toggle between video conferencing platforms, note taking applications, and other resources being used in the virtual classroom. Moreover, DeX offers a number of other convenient, laptop-like features such as a task bar, the ability to resize and maximize windows, and drag and drop items. And all of this comes with device and network security capabilities to protect users from bad actors.

And fourth, like all smartphones, DeX-enabled devices offer maximum connectivity with cellular bands, Wi-Fi, and even private networks (such as those that utilize Citizens Broadband Radio Service spectrum), providing users with the ability to use their smartphones in multiple locations. Smartphones with features such as these clearly are capable of enabling and supporting full participation in remote learning activities, especially for students who study and complete homework from different places or while traveling.[12] The Commission should thus

[11] Mobile apps that are not optimized for DeX (such as Microsoft Teams, WebEx, GoToMeeting, and Google Meet) will open in mobile phone format on the external display.

[12] *See, e.g.*, Comments of Kellogg & Sovereign Consulting, LLC, WC Docket Nos. 21-93, 21-31, and 13-184, at 5 (filed Mar. 17, 2021), https://ecfsapi.fcc.gov/file/1031714430022/KSLLC_RemoteLearningComments%202021-02-16.pdf ("[S]tudents who need support for Internet Access are often high mobility. In other words, these students are not always at the same household address.").

ensure that the Emergency Connectivity Fund's definition of "connected devices" affords schools and libraries the flexibility to purchase smartphones with these types of capabilities.

Samsung appreciates the Commission's efforts to maximize the efficiency and effectiveness of Emergency Connectivity Fund and to expedite the availability of support to address the Homework Gap during the COVID-19 pandemic. By taking the steps outlined herein, the Commission can help provide schools and libraries greater purchasing flexibility while continuing to ensure that eligible connected devices are capable of supporting full participation in remote learning activities.

Respectfully submitted,

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Attachment

VIDEO HIGHER EDUCATION

Studying from home without a laptop? Try Samsung DeX

Published Mar 27, 2020 By: Samsung for Business

With many colleges and universities shifting to remote classes and some dorms closing for the remainder of the spring semester, millions of American students are struggling to adjust to studying from home.

For those who live at home throughout the school year, the transition may be relatively seamless. But for others, finding a way to stay connected, productive and on top of things while away from campus amenities can be challenging.

The disruption to routine, newfound uncertainty and sense of disconnection can be stressful, making it hard to focus on studying and exam prep. Establishing a new routine is critical to getting through the days and weeks ahead.

You'll also need a home workstation so you can continue to attend online lectures, complete assignments and prep for finals. If you already have a home office with a PC, great.

But if you don't have a functional laptop and you're scrambling to put together a study space, this post is for you. The good news is, if you already have a newish Samsung Galaxy S or Note smartphone, you have most of the tech you need for a powerful home workstation.

Creating your home office with Samsung DeX

Samsung DeX is one of the best Samsung smartphone features that most people don't know about. Built into all Samsung Galaxy S and Note devices since 2018's Galaxy S8, DeX lets you extend your phone into an intuitive desktop computing experience. It's also included on Samsung's Galaxy Tab S4, Tab S5e and Tab S6.

With the help of an HDMI adapter, you can connect your mobile device to your monitor — or even a TV — to create a desktop experience. DeX doesn't just mirror your phone's screen, it gives you a PC-like interface with a task bar, the ability to resize and maximize apps, plus all the other conveniences. You really have to try it firsthand to understand just how seamless a smartphone-powered desktop can be.

> *Join the Samsung Student discount program for special offers on Samsung tech!*

Adding a keyboard and mouse

You can navigate in DeX by using your phone as a touchpad, but if you want to be really effective, you'll want to pair a keyboard and mouse. Some multiport adapters used for DeX will allow you to plug in a USB keyboard and mouse combo, but the simplest solution is to use Bluetooth accessories.

Once paired, you can do virtually all of the usual schoolwork tasks you would on a PC, complete with the standard keyboard shortcuts, drag-and-drop and right-click functionality.

Using your school apps in DeX

Samsung DeX is a cool platform, but it wouldn't be much good without the right apps to take advantage of it.

That's where Samsung's close collaboration with Google, Microsoft and a bunch of other workplace software providers really pays off. On the Galaxy Note10 and S20 devices, for example, the Office Mobile app comes preloaded, optimized for DeX. Whether you're working on a Word document, an Excel sheet or a PowerPoint presentation, you'll have access to just about all the features you would on a PC. Keep in mind, however, that Office Mobile in DeX mode will require an Office 365 subscription to save your work. (Check with your school's student affairs office to see if you qualify.)

If you use G Suite, you'll also find working in DeX pretty seamless for Docs, Sheets and Slides, as well as for the Drive, Gmail and Calendar apps. For creative projects, Adobe's mobile apps — including Premiere Rush, Photoshop Express, Lightroom and Sketch — are all DeX-optimized too.

Mobile apps that aren't optimized for DeX will still open, but they'll appear in mobile phone format on your monitor. There is an excellent beta feature, however, in DeX Labs that will let you force-resize apps so they can be maximized to their full potential.

Video conferencing and calls in DeX

Just because you're studying remotely, doesn't mean you have to do it alone. Video conferences are a great way to keep interacting with classmates. Besides, many of your courses may require collaborative group projects. Your mobile-powered workstation makes it easy to stay in touch and keep encouraging each other.

Making and receiving calls in Samsung DeX is easy. After all, you're working on your phone! You can simply open the dialer app and look up a contact or punch in a number. When calls come to your phone while you're working in DeX, you'll see a notification pop up to accept or decline the call.

All the big video conferencing platforms are optimized for DeX, including Bluejeans, Skype and Zoom. When using these apps, you can use your phone as the webcam: just prop your phone beside your monitor.

For both calls and video conferences in DeX, you'll also probably want to connect a Bluetooth headset or some Galaxy Buds.

Printing and scanning from your phone

While there are capabilities on your phone to do things like annotate documents digitally and sketch ideas, sometimes the job just calls for paper and printer ink.

Most modern inkjet printers enable mobile printing over Wi-Fi Direct. Getting set up to print from your Galaxy smartphone is as simple as downloading the print service app, connecting to the printer and configuring your print job settings.

Your smartphone's high-resolution camera can also double as a more than serviceable document scanner. On the Galaxy S20, scanning a document just requires opening the Camera app. The phone will automatically detect the document and even crop it for you. For bigger scan jobs, Office Mobile has a Scan to PDF feature that lets you capture multiple pages.

Expanding storage

If you're studying entirely from your smartphone, you can quickly accrue a lot of files and may be concerned about running out of storage space. While today's mobile devices provide much greater storage capacity than just a few years ago — with 128GB the new standard — if it still isn't enough space for you, you have several options (even if you want to keep all those memes).

First, the latest Galaxy smartphones integrate natively with Microsoft OneDrive and Google Drive. You'll find them both right there in the My Files app, so you can conveniently access files stored in the cloud.

Next, you can opt to add a microSD card. The Galaxy S20 and Note10 lineups both retain the expandable storage slot, allowing you to augment your onboard memory with a high-capacity yet affordable SD card.

Finally, on the Galaxy S20, you can even access network storage. Downloading files from FTP or SMB network storage used to require a laptop, but it's now easy to connect within the My Files app.

Today's smartphones pack an incredible amount of computing power and productivity features. If you're creating a study-from-home setup to remain on top of schoolwork through the current global crisis, going "mobile-only" is a legitimate option with the help of solutions like Samsung DeX. And when you return to the campus in the fall, you might find you like DeX so much that you ditch the PC for good.

Learn more with our Beginner's Guide to Samsung DeX, *or join the* Samsung student discount program *for special offers on Samsung tech.*

DEX | GALAXY S20 | MOBILE WORKSPACE | MOBILE-POWERED DESKTOP | SMARTPHONE TIPS | TECH TIPS | WORK FROM HOME

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