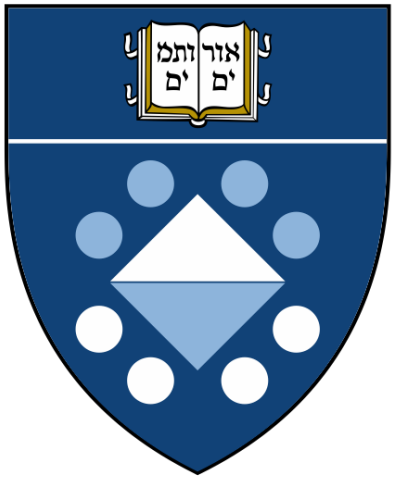

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Android Divestiture and a Roadmap from AT&T

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Seventeen years ago, Google purchased Android in a deal that one Google executive deemed the company's "best deal ever."[1] At the time, the acquisition was so low-key that it was reported by BusinessWeek Online and CNet in 2007,[2] *two years* after it occurred. The price was estimated at just $50 million.[3]

The promise of Android was an open-source operating system (OS), available to any manufacturer. Android's founders thought the lack of a viable open-source OS for mobile devices was a major market gap and set out to fill it. When they sold the project, they chose Google as the buyer in part because of the search giant's promises about accessibility. Google had promised to give away the product to carriers for free, with a plan to help the carriers make money: Google and the carriers would form a partnership and share revenue from search. This would in turn grow the product and realize the Android founders' vision of creating an open environment for smartphone manufacturers.[4]

Seventeen years later, the results of the Android founders' open-source vision are a decidedly mixed bag. Android has taken off: phones running Android dominate the OS market. Android reached 90% licensable OS market share worldwide by 2013 (that is, worldwide OS market share excluding iOS).[5] An estimated 87% of smartphones worldwide run Android *even including* iOS devices.[6] In the U.S., Android had an 85% market share for licensable OS by 2013[7]; this number was roughly 90% by 2014.[8] Once Android attained that dominance, device manufacturers (or original equipment managers, "OEMs") had little choice but to use Android as their operating system. Disappointingly, Google has leveraged that dominant status to further monopolize search and mobile operating systems, a strategy directly counter to the original open vision. For the purposes of this paper, we assume Google's liability, as addressed below, and that the suits against it will prevail. If a court determines that Google violated the Sherman Act, the plaintiffs will need to suggest a remedy that restores the lost competition. This paper proposes divestiture as a remedy to those harms.

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[1] Owen Thomas, *Google Exec: Android Was "Best Deal Ever,"* VENTUREBEAT (Oct. 27, 2010), https://venturebeat.com/2010/10/27/google-exec-android-was-best-deal-ever/.
[2] Stefanie Olsen, *Google Buys Android*, CNET, https://www.cnet.com/culture/google-buys-android/ (last visited May 18, 2022).
[3] Thomas, *supra* note 1.
[4] Chet Haase, *Excerpt: How Google Bought Android—According to Folks in the Room*, ARS TECHNICA (AUG. 18, 2021), https://arstechnica.com/information-technology/2021/08/excerpt-the-history-of-android-as-written-by-a-longtime-android-developer/.
[5] Darrell Etherington, *Android Nears 80% Market Share in Global Smartphone Shipments, as iOS and BlackBerry Share Slides, Per IDC*, TECHCRUNCH (Aug. 7, 2013), https://techcrunch.com/2013/08/07/android-nears-80-market-share-in-global-smartphone-shipments-as-ios-and-blackberry-share-slides-per-idc/.
[6] Jason Cohen, *IOS More Popular in Japan and US, Android Dominates in China and India*, PCMAG (SEP. 4, 2020), https://www.pcmag.com/news/ios-more-popular-in-japan-and-us-android-dominates-in-china-and-india.
[7] Alex Cocotas, *Android Bounces Back from U.S. Market Share Declines*, BUSINESS INSIDER (Mar. 21, 2013), https://www.businessinsider.com/android-stops-us-market-share-decline-2013-5.
[8] Al Sacco, U.S. *Smartphone Market Share Numbers for Q1 2014*, CIO (Apr. 23, 2014), https://www.cio.com/article/291184/infrastructure-u-s-smartphone-market-share-numbers-for-q1-2014.html.

This paper uses the famous breakup of the Bell System in the early 1980s as a model for what the Department of Justice should do to address Google's anticompetitive behavior. First, we discuss Google's anticompetitive behavior, which can be addressed through divestment. Then, we summarize the AT&T divestment and discuss how it can serve as a precedent for the divestiture of Android by Google. Finally, we briefly discuss what such a divestiture would look like, including what must be divested alongside Android or required of Google for the new entity to create a new company that can succeed independently.

I. Google's Anticompetitive Conduct

There is ample evidence that Google has used anticompetitive tactics to create and maintain its monopolies in general search and in mobile operating systems. First, Google anticompetitively ties its search and browser apps. The company forces OEMs to pre-install a variety of apps (up to 30)[9] as a bundle to obtain any of the individual apps through a contract known as the Mobile Application Distribution Agreement ("MADA").[10] In practice, this agreement forces OEMs to take all the apps Google requires as a condition of using Android, because having access to Google Play is necessary to the functioning of the platform. To access Google Play, MADA also requires OEMs to set these Google apps as the default options, including in search. Given that Google Play offers about three million apps, and more than 90 percent of apps on Android devices are downloaded through Google Play, this is no choice at all.[11] The agreement also contains tools to guard Play's dominance, requiring OEMs to preload the Play Store on the default home screen, render it undeletable from the device, and ensure that no other preloaded app store has a more prominent placement than the Google Play Store.[12] This gives Google a significant advantage, especially since "users rarely change their default settings."[13]

The recent story of the Amazon Fire phone shows the leverage Android has over manufacturers. Amazon is, of all companies not named Google or Apple, the most capable of investing the money necessary to create a competing operating system without giving in to Google's requirements. Amazon chose to run its phone based on a heavily customized (or forked) version of the Android operating system, meaning Google would not allow users to use Amazon's OS with its core apps. However, Amazon struggled to sell the phone and eventually took a $170 million charge to wipe out the lost value of its unsold Fire phones just three months after launch.[14] The reported lesson was "[d]on't be different [from Google's Android suite]

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[9] Complaint at ¶ 124, Utah v. Google LLC, No. 3:21-cv-05227 (N.D. Cal. July 07, 2021) [hereinafter State AGs Google Complaint].
[10] Ina Fried, *A Look at Google's Not-Always-Secret Contracts with Android Phone Makers*, VOX (May 3, 2014), https://www.vox.com/2014/5/3/11626422/a-look-at-googles-not-always-secret-contracts-with-android-phone.
[11] Complaint at ¶ 73, United States v. Google LLC, No. 1:20-cv-03010 (D.D.C. Oct. 20, 2020) [hereinafter DOJ Complaint]. *See also* Lauren Feiner, *States Bring a New Antitrust Suit against Google over Its Mobile App Store*, CNBC (July 7, 2021), https://www.cnbc.com/2021/07/07/states-bring-new-antitrust-suit-against-google-over-google-play.html.
[12] State AGs Google Complaint, *supra* note 9, at ¶¶ 20, 121.
[13] *Id*.
[14] Ben Fox Rubin, *Fire Phone One Year Later: Why Amazon's Smartphone Flamed Out*, CNET (July 24, 2015), https://www.cnet.com/tech/mobile/fire-phone-one-year-later-why-amazons-smartphone-flamed-out/.

(unless you're Apple)."[15] One of the key reasons for Fire's failure was the "small app store," which meant that "developers have to make different versions of their apps specifically for the Fire Phone and Kindle Fire, and many haven't bothered…. Most notably, Amazon's store lacks Google's flagship apps, so Fire Phone owners have no easy access to Gmail, YouTube or Google Maps."[16]

Second, MADA requires that OEMs preinstall Google search as the exclusive default at search access points. As outlined in a multistate lawsuit brought by state attorneys general, "in exchange for the right to use Android, Google required [redacted] to make Google the default home screen and general search engine on its mobile devices" and "Google pays Android device manufacturers and U.S. mobile carriers [redacted] dollars annually to ensure that Google remains the default general search engine and, in most cases, the exclusive general search services option distributed with the device."[17]

As we know from the behavioral economics literature, defaults are extremely powerful,[18] and in the technology space, many users stick with whatever option comes pre-installed and set. Recent research suggests that users who are exposed to other high-quality search engines as the default "lowered the exclusive use of [G]oogle."[19] Thus, for any potential search rival, the required pre-installation of Google as the default search option is a heavy burden to overcome. Google's arrangement with Apple is a financial commitment for the company: Google pays Apple roughly $8-12 billion per year to build Google search into Apple's products and set the search engine as the default across the board, such as in Safari. This payment accounts for between 14 and 21% of Apple's annual profits.[20] Thus, OEMs who are forced to make Google the default, exclusive search option are in essence forced to provide a service that is worth billions. Further, Google's deal with Apple demonstrates the fallacy of Google's claims that its market share is simply the result of having a superior product that consumers choose.[21] If that is the case, why pay billions of dollars per year to remain the default?

Third, Google prevents OEMs from creating and using any alternate version of Android other than the version approved by Google, through what is now known as the Android Compatibility Commitment (ACC, formerly known as the Anti-Fragmentation Agreement).[22]

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[15] *Id.*
[16] Victor Luckerson, *4 Reasons Amazon's Fire Phone Was a Flop*, TIME (OCT. 24, 2014), https://time.com/3536969/amazon-fire-phone-bust/.
[17] Complaint at ¶ 45, Colorado v. Google LLC, No. 1:30-cv-03715 (D.D.C. Dec. 17, 2020) [hereinafter Multistate Google Complaint].
[18] Richard Thaler, Cass Sunstein, & John Balz, *Choice Architecture*, *in* THE BEHAVIORAL FOUNDATIONS OF PUBLIC POLICY 428, 430-31 (Eldar Schafer ed., 2013).
[19] Omar Vásquez Duque, *The Anticompetitive Stickiness of Default Applications: Addressing Consumer Inertia with Randomization*, (Working Paper, 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4077132.
[20] Daisuke Wakabayashi & Jack Nicas, *Apple, Google and a Deal That Controls the Internet*, N.Y. TIMES (Oct. 25, 2020), https://www.nytimes.com/2020/10/25/technology/apple-google-search-antitrust.html.
[21] For example, see Romesh Vaitilingam, *Does Google Have Too Much Market Power?*, CHI. BOOTH REV. (Nov. 24, 2020), https://www.chicagobooth.edu/review/does-google-have-too-much-market-power.
[22] Janko Roettgers, *How Google Kneecapped Amazon's Smart TV Efforts*, PROTOCOL (Mar. 11, 2020), https://www.protocol.com/google-android-amazon-fire-tv.

These agreements also leverage the Play Store, and require that OEMs who wish to access any of Google's suite of proprietary Android apps not create a forked version of Android.[23] These agreements inhibit the development of new OSs which could challenge Google's version of Android and create alternatives for OEMs.

Google has already faced enforcement actions for its conduct. The European Union began investigating Google in 2010; in 2018, the company was fined $5 billion fine by the EU.[24] South Korean regulators also fined Google hundreds of millions of dollars for blocking Android customization.[25] However, these fines do not seem to have changed Google's behavior more broadly. As one outlet wrote, "Europe failed to tame [G]oogle."[26] Google's market share in search in Europe is at a similar level as when the continent started to apply regulation.[27] This may be because the European Commission "largely relies on the companies under investigation to design remedies to resolve the problematic conduct — a system critics say has helped Google evade meaningful competition."[28] Thus, in future enforcement actions against anticompetitive conduct, the remedy is particularly important.

Recently, the U.S. Department of Justice and state Attorneys General have brought actions against Google for its Android conduct. The U.S. Department of Justice filed a complaint against Google in 2020,[29] regarding its use of anti-forking agreements based on tying apps,[30] bundling of all apps to access any apps,[31] and conditioning revenue sharing on being the preset default search engine.[32] In December 2020, a group of 38 attorneys general announced a bipartisan lawsuit against Google, alleging the company had undertaken anticompetitive actions

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[23] South Korea also fined Google over its anti-forking agreements in 2021. *See* Jon Porter, *Google Found Guilty of Restricting Android Forks in South Korea, Fined $177 Million*, VERGE (Sep. 14, 2021), https://www.theverge.com/2021/9/14/22673202/google-south-korea-android-fork-fine-anti-fragmentation-agreement-antitrust.

[24] Press Release, European Commission, Antitrust: Commission Fines Google €4.34 billion for Illegal Practices Regarding Android Mobile Devices to Strengthen Dominance of Google's Search Engine (Jul. 18, 2018), https://ec.europa.eu/commission/presscorner/detail/en/IP_18_4581.

[25] Heekyong Yang, *S. Korea Fines Google $177 Million for Block Android Customisation*, REUTERS (Sep. 14, 2021), https://www.reuters.com/technology/skorean-antitrust-agency-fines-google-177-mln-abusing-market-dominance-2021-09-14/.

[26] Simon Van Dorpe & Leah Nylen, *Europe Failed to Tame Google. Can the US Do Any Better?*, POLITICO (Oct. 22, 2020), https://www.politico.eu/article/europe-failed-to-tame-google-can-the-us-do-any-better/.

[27] *Id.*

[28] *Id. See* Vanessa Turner, *Regulation 2: Remedies in Antitrust Cases under EU Competition Law*, 11 J. EUR. COMPETITION L. & PRAC. 430, 432-3 (Sep. 26, 2020) ("Although the Commission is entitled to impose specific remedies on undertakings rather than to simply take a principles-based approach, it has more often made use of the option to require undertakings to submit their own remedy proposals. Although it is true that the undertakings know their business best and are thus theoretically well placed to ensure that remedies are effective, their incentives to are not necessarily aligned with this outcome.").

[29] DOJ Complaint, *supra* note 11.

[30] *Id.* ¶ 54.

[31] *Id.* ¶ 55.

[32] *Id.* ¶ 56.

to protect its general search monopolies and exclude rivals.[33] In January, 2021, the DOJ and multistate Google complaints were consolidated for discovery purposes, but the cases have not yet been fully consolidated for trial; both are still proceeding.[34] In July 2021, 36 states and D.C. brought a suit accusing Google of maintaining a Play Store monopoly, favoring its own store and giving developers no choice but to distribute apps through the store.[35] Texas also brought a suit against Google, focused on the companies' monopoly over advertising.[36]

II. AT&T Divestiture as Precedent

Prior to divestiture, the Bell System was a vertically-integrated monopoly designed to deliver end-to-end telephone communications service to its customers. The Bell System was composed of three primary components.: (1) Local service provided by the local Bell operating companies (BOCs), which also acted as the service interface with customers; (2) Long-distance service to both telephone companies and their customers provided by Long Lines Division of the American Telephone & Telegraph Company (AT&T); and (3) Telephone instruments, transmission equipment, and switching equipment, necessary for the operating companies and Long Lines, made by Western Electric Company (WECO), but owned and directed by AT&T.

In 1974, the Department of Justice filed an antitrust complaint against AT&T.[37] The DOJ contended that, by maintaining control of local exchange, long-distance, and equipment, the Bell System had created a "triple-bottleneck" in order to monopolize the United States's telecommunications industry.[38] Among the Department of Justice's allegations against AT&T was the contention that AT&T had illegally refused to provide competitors with local interconnection service.[39] One of the Bell System's requirements permitted the hook-up of a long-distance competitor *only* if hook-up occurred within the confines of the "customer's premises," meaning that a competitor would have to have to have hook-ups locally wherever a call began, ended, and anywhere in between; "[t]he effect of this restriction was to prevent competitors from entering the intercity market gradually, and thus effectively from entering the

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[33] Taylor Hatmaker, *Google Slammed for 'monopoly power' in New Antitrust Lawsuit from 35 States*, TECHCRUNCH (Dec. 17, 2020), https://techcrunch.com/2020/12/17/google-antitrust-lawsuit-new-york-colorado-35-states-search/; Multistate Google Complaint, *supra* note 17.

[34] Order Granting in Part and Denying in Part Plaintiffs' Motion to Consolidate, Colorado v. Google LLC, (D.D.C. Jan 7. 2021). *See also* Minute Order, United States v. Google, Case No. 1:20-cv-03010, (July 14, 2022).

[35] Cat Zakrzewski, Gerrit De Vynck, & Rachel Lerman, *36 States Sue Google over How It Manages Its Play Store, Alleging Damage to Both Consumers and App Developers,* WASH. POST (July 7, 2021), https://www.washingtonpost.com/technology/2021/07/07/google-play-store-lawsuit/; State AGs Google Complaint, *supra* note 9. The trial is currently set to begin on April 3, 2023. *See* Scheduling Order, *In re* Google Play Antitrust Litig., No. 191 (Feb. 2, 2022). The case was combined into an MDL with an Epic Games suit and two consumer class actions. *See In re* Google Play Store Antitrust Litigation, (N.D. Cal.) No. 3:21-md-02981.

[36] Second Amended Complaint, Texas v. Google LLC, 2021 WL 4146613 (E.D. Tex., Aug. 4, 2021).

[37] United States v. American Telephone & Telegraph Co., 461 F. Supp. 1314, 1318 (D.D.C. 1978).

[38] *See* PAUL W. MACAVOY, THE FAILURE OF ANTITRUST AND REGULATION TO ESTABLISH COMPETITION IN LONG-DISTANCE TELEPHONE SERVICES 16 (citing *Hearings on H.R. 13015 Before the Subcomm. On Communications of the House Comm. On Interstate & Foreign Commerce*, 95th Cong., 2d Sess. 748 (1978) (testimony of Assistant Attorney General for Antitrust John H. Shenefield)).

[39] *U.S. v. AT&T* at 1318.

market at all."[40] As a consequence of AT&T's anticompetitive practices, the DOJ claimed: "(1) defendants have achieved and are maintaining a monopoly of telecommunications service and equipment; (2) competition in these areas has been restrained; and (3) purchasers of telecommunications service and equipment have been denied the benefits of a free and competitive market."[41]

According to the DOJ, AT&T's actions were a violation of Section Two of the Sherman Act.[42] The DOJ sought several forms of divestiture: "divestiture by AT&T of all Western Electric stock; the separation of some or all of the Long Lines Department of AT&T from the Bell Operating Companies; the divestiture by Western Electric of its manufacturing and other assets sufficient to insure competition in the manufacture and sales of telecommunications equipment."[43]

After lengthy litigation, the DOJ and AT&T eventually agreed on the terms of a consent decree. In 1983, the court approved their proposed decree, including divestiture, and ordered only a few modifications.[44] The court justified its support of divestiture as a remedy for several reasons. First, the court found that AT&T "dominated" almost every part of the American telecommunications industry.[45] Thus, "[a]ccording to credible evidence, this integrated structure has enabled AT&T for many years to undermine the efforts of competitors seeking to enter the telecommunications market."[46] Second, the court found that AT&T's control of local telephone service was "key to the Bell System's power to impede competition."[47] AT&T's control of this local monopoly, the court explained, had prevented competing long-distance carriers and competing equipment manufacturers from gaining access to the local network, thereby disadvantaging them.[48]

Allegedly, AT&T was also using the profits it earned from its local monopoly to subsidize its long distance and equipment businesses, in which it was competing with others.[49] A divestiture, the court concluded, would "sever the relationship between this local monopoly and the other, competitive segments of AT&T, and it [would] thus ensure certainly better than could any other type of relief that the practices which allegedly have lain heavy on the

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[40] "For example, because of this restriction, a customer whose sole office was in St. Louis could not choose to use the services of an AT&T competitor for part of a route (*e.g.,* from St. Louis to Chicago), and then AT&T's services for the remainder of the route (*e.g.,* from Chicago to Bethesda, Md.) because the St. Louis customer did not have the "premises" in Chicago that AT&T required for interconnection. Thus, to receive service for Bethesda as well as for Chicago, the customer was required to purchase both services from AT&T." United States v. American Tel. and Tel. Co., 552 F. Supp. 131, 162 n.123 (D.D.C. 1983) (citing *U.S. v. AT&T* at 1354).
[41] *U.S. v. AT&T* at 1318.
[42] *Id.* at 1317.
[43] *Id.*
[44] *American Tel. and Tel. Co.*, 552 F. Supp. 131.
[45] *Id.* at 222.
[46] *Id.*
[47] *Id.* at 223.
[48] *Id.*
[49] *Id.*

telecommunications industry will not recur."[50] Despite the costliness of the divestiture, it is "widely considered to be a 'successful divestiture.'"[51] As the next section of this paper explains, Google's divesture would be similarly successful.

III. Similarities Between the AT&T and Google Divestitures

According to a 2020 DOJ complaint against Google, the company uses Android to employ anticompetitive strategies similar to those utilized by AT&T pre-divestiture. First, despite the original vision of Android as an open-source operating system available to a variety of manufacturers, Google has stopped manufacturers from freely using Android.[52] In order to use the Android operating system, and OEM must "contractually agree to (1) take a bundle of other Google apps, (2) make certain apps undeletable, and (3) give Google the most valuable and important real estate on the default home screen."[53] Google also "requires Android device manufacturers that want to preinstall Google's proprietary apps to sign an anti-forking agreement; these agreements set strict limits on the manufacturers' ability to sell Android devices that do not comply with Google's technical and design standards."[54]

Like Google, AT&T's three areas of monopoly control allowed it to use one to give it market power in another. AT&T's divestiture of the local Bell Operating Companies meant that regional "Baby Bells" could provide local service while AT&T continued to provide long distance services; at the same time, the "Baby Bells" would be able to get equipment from sources other than AT&T's equipment subsidiary. As a result, AT&T was no longer able to exclude long distance or equipment manufacturing competitors. The results were clear from the subsequent emergence of long distance competitors such as MCI and Sprint, lower consumer prices, and AT&T's eventual sale of Western Electric, which had proven unprofitable once AT&T was no longer able to force its customers to purchase its equipment.[55]

Likewise, Google's ownership of Android is at the heart of its market power because, outside Apple, an OEM has no choice but to use Android if it wants to offer a working phone. There is no possibility for an OEM to try using another search engine (e.g. Bing) or app store (e.g. Samsung) if Google ties its operating system to use of Google Search and Google play. As with AT&T, a clean and simple divestiture would sever Google's control of Android from all its other products. Manufacturers could try entrants without losing access to Android, which would

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[50] *Id.* at 224.
[51] *See* Maham Usman, *Breaking Up Big Tech: Lessons from AT&T*, U. PENN. L. REV. 523, 533 (2021) (quoting Brian Naylor, *Could the Old AT&T Break-Up Offer Lessons for Big Tech Today?*, NPR (June 26, 2019), https://www.npr.org/2019/06/26/736344175/could-the-old-at-t-break-upoffer-lessons-for-big-tech-today).
[52] DOJ Complaint, *supra* note 11, at 18.
[53] *Id.* at 19.
[54] *Id.*
[55] *See, e.g.,* Michael Dresser, *10 Years After Divestiture by AT&T;, Baby Bells and Competitors Flourish,* BALT. SUN (December 26, 1993), https://www.baltimoresun.com/news/bs-xpm-1993-12-26-1993360162-story.html

jumpstart competition in these areas.

IV. The Inadequacy of Behavioral Remedies

Behavioral remedies are unlikely to succeed. This is clear from the European Commission's 2018 attempt to prevent Google from imposing the illegal restrictions that it had imposed on Android device manufacturers and mobile network operators to cement its search engine as the default. To do so, the Commission required Google to agree to an auction, in which rival search engines would appear on a screen of options from which Android users could choose when they set up their phones. This solution has drawn criticism from scholars and industry professionals alike.[56] Luther Lowe, senior vice president of public policy at Yelp, lamented, "[t]he commission was sending an ambulance to a funeral."[57] Describing the Commission's remedy, he elaborated, "[t]hat's a remedy that would have been attractive a decade ago, but that horse left the barn."[58] More empirical evidence supports the ineffectiveness of the Commission's behavioral remedies: Google Search's market share in the European Union continues to hover around ninety percent.[59]

It is possible that DOJ will consider behavioral remedies, as the European Commission did, to provide a solution—but these remedies will be wholly inadequate. The DOJ could require, for example, Google to provide the standalone Android entity with access to its applications, including GooglePlay, for a period of time. However, this would require continued court oversight and would present challenges to the standalone entity. Not giving the standalone control over GMS capabilities core to Android's functioning would create a company that lacks control over many aspects of its own OS's function. For a time, the standalone would be able to use those applications to help Android function, but it would eventually have to reinvent its own version of many key features functionality just to retain Android's current operating level. Recent antitrust cases have shown remedies conditioned on time-limited access agreements can lead to problems later that require structural action by courts.[60] For example, in a high-profile recent case, the Department of Justice allowed a merger of vertically integrated door manufacturers on the condition that the combined entity honor long-term supply agreements for a key input it sold to competitors. After the merger, however, the vertically integrated company used a variety of underhanded and anticompetitive tactics to frustrate sales to the competitor; a court eventually had to order divestiture to create a long-term remedy. If core functions necessary to the function of Android were retained by Google, Google could attempt to undermine Android's success through those levers.

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[56] PAUL HEIDHUES ET AL., MORE COMPETITIVE SEARCH THROUGH REGULATION 2 (Digital Reg. Project, Pol'y Discussion Paper No. 2, May 20, 2021), https://tobin.yale.edu/sites/default/files/Digital%20Regulation%20Project%20Papers/Digital%20Regulation%20Project%20-%20Search%20-%20Discussion%20Paper%20No%202%20(1).pdf.

[57] Simon van Dorpe & Leah Nylen, *Europe Failed to Tame Google. Can the U.S. Do Any Better?*, POLITICO (Oct. 21, 2020), https://www.politico.com/news/2020/10/21/googleeurope-us-antitrust-431036.

[58] *Id.*

[59] HEIDHUES ET AL., *supra* note 56, at 2.

[60] Steves and Sons, Inc. v. JELD-WEN, Inc., 988 F.3d 690 (4th Cir. 2021).

V. What Google Needs to Divest

Because Android used to be a standalone entity, one might imagine that divestiture is as simple as spinning off the Android Open Source Project (AOSP) into its own company and going from there. However, the AOSP is an open source project and therefore Google has limited control over it; its divestiture would not solve the problem of Google's monopoly. Google Mobile Services (GMS)[61] apps include many data-intensive core applications of the Android platform, such as Google Search, Chrome, YouTube, Maps, Photos, Music, Gmail, and Google Drive. Most importantly, GMS includes Google Play (formerly "Android Market" and also known as the "Google Play Store"). Google Play is the official app store for android devices, and android users must use Google Play to download crucial applications for use of the OS in general. Without access to AOSP or Google Play, an OEM cannot sell a phone. Thus, OEMs must agree to Google's terms in order to have a business model. Any divestiture remedy needs to take into consideration how to deal with GMS and make certain that the new standalone owner of Android can operate without it.

Any standalone Android company that comes out of divestiture must have access to the core functionalities of GMS, or Google will retain too much control. Conceptually, there is a relatively straightforward solution. If Android divestiture includes Google Play, within which GMS is housed, the new company would have all the required functionality to operate. If AOSP and GooglePlay were divested into another corporation, it could be regulated for some period of time to sell both AOSP and GooglePlay at a fixed price per handset to any customer who wishes to purchase it. The OEMs would not have to use the GooglePlay store if they choice not to.

There are, however, two complications. First, Google would likely respond to the threat of Android plus Google Play divestiture by moving GMS functionalities in Google Play to other apps. Because of that danger, the court would need to prevent this. An easy solution would be to use the functionalities in GMS as of a base year (such as 2022). Alternatively, the court could create a technical committee to determine what functionalities in GMS are critical to the success of the standalone Android entity. For example, the apps would need to be able to function on the new independent OS without Chrome being a prerequisite. Making the apps on the new OS operable without chrome is technologically easy; there is no reason apps need a browser installed to work. A browser is a requirement on Android only because Google has chosen to embed some of the Android functionality within Chrome. The divestiture of the app store function of Google Play is the key because it is the gateway access point to the Android ecosystem and has allowed Android to gain the leverage it needs to pull off its tying agreements.

The second, more minor problem, is that Google Play is no longer solely the Android marketplace; it also is the channel through which Google sells multimedia products that are not specific to Android.[63] That functionality could be cleaved in two during a divestiture, with

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[61] Calvin Wankhede, *What Are Google Mobile Services (GMS)?*, ANDROID AUTHORITY (Mar. 3, 2022), https://www.androidauthority.com/google-mobile-services-gms-3025963/.

[63] *How Google Play Works*, GOOGLE PLAY, https://play.google.com/about/howplayworks/ (last visited May 18, 2022).

Google retaining the multimedia business and Android getting the rest of Google Play. Alternatively, and more simply, the court could simply order full divestiture of Google Play including the multimedia business.[64]

Another solution is to divest the functionalities of GMS that a committee of experts determines are core to the function of Android, while allowing Google to retain the rest and compete, just like any other company. Outside of Google Play and apps that embed core functionalities such as Chrome, the new OS should be able to replace other functionalities provided in GMS. For example, there are a variety of other browser apps that can provide the service of browsing the web, or apps that provide maps and directions. Additionally, Google would likely allow users to use their applications voluntarily. After all, the point of Google's anticompetitive tying strategy is to force manufacturers to set Google's applications as the default so users use Google apps and tech giant can collect data and sell ads. If Google lost the ability to use its market dominance and control over Google Play to tie these apps and services to Play, Google would be unlikely to respond by preventing users from the world's largest mobile OS from using their apps. Google would still want as much usage as possible.

VI. Conclusion

In this case, divestiture is a necessary remedy to disrupt Google's simultaneous monopoly over OS and search. As the AT&T divestiture demonstrates, divestiture has historically served as an effective remedy for monopoly power. It is a far more sensible remedy to employ than, say, the European Commission's behavioral remedies for Google, which have proven to be ineffective at curbing Google's anticompetitive control of OS and search. Google's ownership of Android resembles the vertical integration of pre-divestiture AT&T, and, if anything, Google divesting Android would be a simpler task. It is clear what components of Android must be divested and how. Google must divest GMS, for example, to ensure the functionality of Android. For the foregoing reasons, we hope that an Android divestiture will come to fruition.

[64] A third possibility would be to regulate a certification of the applications are certified for complying with set privacy standards.