Free Basics in Real Life

Six case studies on Facebook's internet "On Ramp" initiative from Africa, Asia and Latin America

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Executive summary and key findings

Facebook's Free Basics program aims to help bridge the digital divide through a mobile-based platform that allows users to connect to a handful of online services free of charge. In a vision statement for the program, Facebook surmises that "[by] introducing people to the benefits of the internet" they will help justify the cost of mobile data and thereby "bring more people online and help improve their lives."

The program has been the subject of controversy since its inception, reviving the debate over open access and the digital divide. Digital rights experts have argued that the program violates network neutrality, brings an imbalance to local content and mobile subscription markets, and creates a "poor internet for poor people" that does not allow users to truly explore and discover the global internet.[1] Others have praised it for offering users some degree of experience with the web, and for incentivizing operators to make mobile data more affordable for more customers.

With a few exceptions, the voices of the program's users, along with those of local experts on ICT and access to knowledge in the countries where the program has been launched, have been underrepresented in these debates.

This study aims to begin correcting this imbalance, to increase the public, ICT and digital rights sectors' knowledge about the utility of Free Basics and to encourage further research on the topic. Our team of Global Voices contributors hailing from six countries in the Global South tested and evaluated the Free Basics app and reviewed existing literature about it in their countries. We measured Free Basics against a collectively developed set of benchmarks concerning usability, quality of connection, language and accessibility, content, and company policies. We conducted all of our research locally from within the countries where Free Basics is deployed, assessing the app within the local and cultural context where it is offered.

Our research casts doubt upon Facebook's contention that this technology is truly serving as an "on ramp" to the global internet. Our case studies illuminate systemic features of Free Basics' user interface, content offerings, and technological architecture that strictly limit the tool's utility for many people within the populations that the company claims to reach. We also conclude that Free Basics' architectural and content limitations are largely artificial and exist primarily as a mechanism for

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[1]Cory Doctorow, "'Poor Internet for poor people': India's activists fight Facebook connection plan," The Guardian, January 2016, https://www.theguardian.com/world/2016/jan/15/india-net-neutrality-activists-facebook-free-basics.

collecting profitable data from users. This paper highlights the following findings:

- **Language: Free Basics does not meet the linguistic needs of target users.** No version of the program tested in our study adequately served the linguistic needs of the local population. In heavily multilingual countries including Ghana, Pakistan and Philippines, the app is offered in only one local language.

- **Content and usability: Free Basics features an imbalance of sites and services.** All versions we tested lacked key local content and services, but featured a glut of third-party services from privately owned companies in the United States. Apart from services that are owned and/or operated by Facebook, the versions of Free Basics that we tested included none of the world's 15 most popular social communication platforms, nor did they include an email platform.

- **Net neutrality: Free Basics violates net neutrality principles.** Free Basics does not allow users to browse the open internet. It offers access to a small set of services and prioritizes the Facebook app by actively urging users to sign up for and log into the service. The versions of Free Basics that we tested also divided third-party services into two tiers, giving greater visibility to one set of information over another.

- **Privacy: Facebook is accessing unique streams of user metadata** from all user activities on Free Basics, not just the activities of users who are logged into Facebook. The company collects information about which third-party sites Free Basics users access, when, and for how long.

Introduction: Is Free Basics helping to bridge the digital divide?

For more than five years, UN agencies have emphasized in research and resolutions the vital role of the internet as a foundation for civic life, education and economic development. In a 2011 report, the then UN Special Rapporteur for Freedom of Opinion and Expression Frank LaRue urged states to "assume their commitment to develop effective policies to attain universal access to the Internet." He further cautioned: "Without concrete policies and plans of action, the Internet will become a technological tool that is accessible only to a certain elite while perpetuating the 'digital divide.'"[2]

Although internet penetration has risen dramatically over the past 10 years, more than half of the world's population is still not connected to the internet. Governments, intergovernmental bodies, technology companies and NGOs are working to bridge this divide using a variety of approaches large and small.

In 2014, Facebook launched Internet.org, an initiative intended to help narrow the global digital divide by giving people free access to web-based applications on their mobile phones.

The main product of the initiative is a mobile app that gives users access to a small suite of data-light websites and services: literally a set of apps within the app. It has been described by Facebook and other stakeholders as an "on ramp" to using the global internet. The company reasons that "[by] introducing people to the benefits of the internet" they will help justify the cost of mobile data and thereby "bring more people online and help improve their lives."

In analyzing the benefits and drawbacks of the program, some have praised it for offering users some degree of experience with the web, and for incentivizing operators to make mobile data more affordable for more customers. Digital rights experts have argued that it violates network neutrality and data privacy principles, brings an imbalance to local content and mobile subscription markets, and creates a "walled garden"[3] or "poor internet for poor people"[4] that does not allow users to explore and discover the global internet, despite its name, Internet.org. Early critiques even appear to have elicited a name change for the application, which has been branded as "Free Basics" since 2015.

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[2] *Report of the Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Frank La Rue*, Human Rights Council, Seventeenth session Agenda item 3, United Nations General Assembly, 16 May 2011. http://www2.ohchr.org/english/bodies/hrcouncil/docs/17session/A.HRC.17.27_en.pdf

[3] Vivek Wadwa, "Seeing Beyond the Hubris of Facebook's Free Basics Fiasco," TechCrunch, February 2016.https://techcrunch.com/2016/02/13/seeing-beyond-the-hubris-of-facebooks-free-basics-fiasco/

[4] Cory Doctorow, "'Poor Internet for poor people': India's activists fight Facebook connection plan," The Guardian, January 2016, https://www.theguardian.com/world/2016/jan/15/india-net-neutrality-activists-facebook-free-basics

Debates about the project peaked in 2015 when India's Telecommunications Regulatory Authority banned differential pricing[5] for data services and thus Free Basics, after many months of public debate about the program and a robust public relations campaign by Facebook and company CEO Mark Zuckerberg. Although it was consequently canceled in India, which represents Facebook's largest market in the world after the US, it has been deployed and is currently active in 63 countries across Africa, Asia and the Americas, and in Iraq and Jordan.[6]

With a few exceptions, the voices of the program's users, along with those of local experts on ICT and access to knowledge in the countries where the program has been launched, have been underrepresented in these debates.

Indeed, a cursory review of commentary in the digital rights advocacy space (in blog posts, op-eds, tweets and group mailing list conversations) suggests that relatively few Western critics of the program have much (if any) experience using the Free Basics app. It is also difficult to pass judgment on Free Basics at large, because it is "localized"—the set of sites and services it offers depend on country, region, telecommunications operator and other factors.

This lack of concrete information about the program and its practical applications, along with the tensions that have emerged between those who, like Mark Zuckerberg, advocate that "some internet is better than none"[7] and those who aspire to a more neutral and decentralized internet experience for all people, inspired a team of Global Voices contributors and staff to explore the app for themselves and contribute to the debate some concrete information about its benefits and drawbacks.

With a team of researchers who hail from and live in Colombia, Ghana, Kenya, Mexico, Pakistan and Philippines, we set out to answer two overarching questions:

- Is Free Basics being used by the people it is intended to serve?
- How well does it serve local interests and needs?

During the months of March and April 2017, we tested the unique versions of the app in six different countries, in an effort to bring more qualitative data into the global conversation about how to increase internet access for more people in more parts of the world, and how to concurrently

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[5] Ayush Soni, "India deals blow to Facebook in people-powered 'net neutrality' row," The Guardian, February 2016, https://www.theguardian.com/technology/2016/feb/08/india-facebook-free-basics-net-neutrality-row
[6] Internet.org, "Where We've Launched", https://info.internet.org/en/story/where-weve-launched/
[7] "If someone can't afford to pay for connectivity, it is always better to have some access than none at all," Mark Zuckerberg, Facebook post, April 16, 2015, https://www.facebook.com/zuck/posts/10102033678947881

promote and protect free expression, privacy and access to information online. As a wholly decentralized community of writers and activists around the world, we believe these goals must go hand in hand.

Using a methodology developed in consultation with Global Voices community members, staff and ICT policy experts, we explored the app's various functions and features keeping in mind the interests and needs of local populations who would be less likely to have internet access, and thus be target users of the technology. We also conducted a literature review of relevant research and commentary on Free Basics and the technologies used to support this and similar low-cost access initiatives.

We notified Facebook policy staff about our research early in the process, and made multiple attempts to speak with the Free Basics team policy staff members about the product during the months of April, May and June 2017. Ultimately, we were invited to submit questions about the product via email, but Facebook declined to answer most of our questions, opting instead to give a general overview of the product.

We were not able to conduct a survey. Our findings do not fully represent the interests of the app's users, but are meant to show how the app works and offer some analysis of its features and functions within local contexts.

We intend for our findings to inform conversations and inspire new research projects within internet access and digital rights advocacy communities about the various institutions that are developing technical tools intended to make the internet accessible for more people, worldwide.

1. **Nuts and bolts: How does it work? Who uses it?**

At the outset, Internet.org was a partnership between Facebook, Samsung, Ericsson, MediaTek, Opera, Nokia and Qualcomm.[8] The seven companies pledged to co-design specialized technical infrastructure that would allow users to access a fixed set of lightweight web-based services, bundled together in the Free Basics app. The group then sought local partnerships with individual operators, who provided the mobile data allowance necessary for users to connect with and use the app.

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[8] Wikipedia.org, "Free Basics", https://en.wikipedia.org/wiki/Free_Basics

From the start, they made it clear that this special infrastructure could support only a limited amount of mobile data. In practice, this means that most sites and services within the Free Basics app contain no video, no ads and few if any images.

On the Internet.org website, Facebook describes Free Basics as follows:

> Free Basics by Facebook provides people with access to useful services on their mobile phones in markets where internet access may be less affordable. The websites are available for free without data charges, and include content on things like news, employment, health, education and local information. By introducing people to the benefits of the internet through these websites, we hope to bring more people online and help improve their lives.[9]

The original plan elicited critiques that by hand-picking the sites and services included in the app, Facebook was acting as an information gatekeeper. Facebook soon after decided to open the program so that any developer could submit their code, in hopes that it would be included in the Free Basics package.[10]

In a blog post announcing the change, the company wrote:

> Our goal with Internet.org is to work with as many developers and entrepreneurs as possible to extend the benefits of connectivity to diverse, local communities. To do this, we're going to offer services through Internet.org in a way that's more transparent and inclusive.[11]

Each of the six versions that we tested included up to 150 websites and services each. The traffic that users generate while visiting these websites travels as follows:

user's device → operator network infrastructure → **Facebook proxy server** → target website

In contrast to other internet traffic, Free Basics traffic travels takes an extra hop, passing through a special Facebook-owned and operated proxy server that allows the company to deliver access to these services without exceeding limits of data usage. This also creates one centralized location (the proxy servers) in which traffic metadata is collected and stored for 90 days.[12] [13] A description of the

[9] "Free Basics by Facebook," https://info.internet.org/en/story/free-basics-from-internet-org/
[10] "Free Basics: Myths and Facts," Internet.org, https://info.internet.org/en/blog/2015/11/19/internet-org-myths-and-facts/
[11] "Announcing the Internet.org platform," Facebook newsroom, https://newsroom.fb.com/news/2015/05/announcing-the-internet-org-platform/
[12] "Internet.org: Myths and Facts," Internet.org, November 2015, https://info.internet.org/en/blog/2015/11/19/internet-org-myths-and-facts/
[13] "From within Free Basics, all traffic is routed through the Internet.org proxy. We do this in order to create a standard traffic flow so that operators can properly identify and zero rate your service. It is important to realize that your service is neither hosted nor cached by Internet.org — it still operates on your own servers and is completely maintainable by you — and by detecting requests that pass through the Free Basics Platform, you can apply controls such as geo-blocking for your content and/or measure your Free Basics Platform traffic." https://developers.facebook.com/docs/internet-org/platform-technical-guidelines

technical criteria for developers appears on the Free Basics website.[14]

Who pays for what?

Facebook directly confirmed to our researchers that the program is available to all operators that want to participate. In many countries, multiple operators are offering the service. Beyond this, there is relatively little public information about how agreements with telecommunications operators are formed. Documentation for developers indicates that "operators have made significant economic investments to bring the internet to people globally," suggesting that at least some costs of the program are being carried by operators. In interviews with Virgin Mobile, Airtel and other providers that offering Free Basics in multiple countries, BuzzFeed News found that providers (not Facebook) were covering the costs of the additional data usage.[15] Facebook appears to be shouldering the costs and development of the technology.

How has it fared 'in the wild'? Who uses it?

In a July 2015 press release following the launch of Free Basics (then referred to as Internet.org) in Zambia, Facebook announced that "...more than half of the people who come online through Internet.org are paying for data and accessing the internet within the first 30 days."[16] This statistic has been cited in multiple company statements since, yet it is unclear whether this proportion of users had never used the internet or paid for mobile data before using Free Basics.

A 2016 survey by the Alliance for Affordable Internet (a multistakeholder group of which Facebook is a member) of 8,000 users of Free Basics and Wikipedia Zero (a free version of Wikipedia, accessible regardless of whether users pay for mobile data) in eight countries found that only 12% of users had never used the internet before accessing it through one of these two plans, though users surveyed in India (prior to the program's effective ban) and Peru showed slightly higher numbers, between 15 and 22%.[17] The Alliance (A4AI) also found that 35% of users took advantage of zero-rating as a way to augment their internet access by combining their plan with other options, rather than using it as their sole method of getting online.

The "Our Impact" page on the Internet.org website, which describes the accomplishments of

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[14] Facebook, "Participation Guidelines", https://developers.facebook.com/docs/internet-org/participation-guidelines

[15] Sheera Frenkel and Caroline O'Donovan, "Here's How Free Basics is Actually Being Sold Around the World," BuzzFeed news, January 2016, https://www.buzzfeed.com/carolineodonovan/heres-how-free-basics-is-actually-being-sold-around-the-worl?utm_term=.dlMOb3BJZ6#.bo4O2WYKJZ

[16] "One Year In: Internet.org Free Basic Services," Internet.org blog, July 2015, https://info.internet.org/en/blog/2015/07/27/one-year-in-internet-org-free-basic-services/

[17] Digging into the Data: Is Zero-Rating Connecting the Unconnected?, Alliance for Affordable Internet, June 2016, http://a4ai.org/is-zero-rating-really-bringing-people-online/

Free Basics, suggests Facebook may be taking other metrics into account, though it does not provide concrete data on the outcomes of using Free Basics. The section reads as follows:

> [We've] brought more than 25 million people online who otherwise would not be and introduced them to the incredible value of the internet. They're doing better in school, building new businesses, and learning how to stay healthy.[18]

The company has not published recent data on how many people are using the app in total and declined to answer when we asked them for this information.

Internet and Mobile Penetration rates 2005-2013[19]
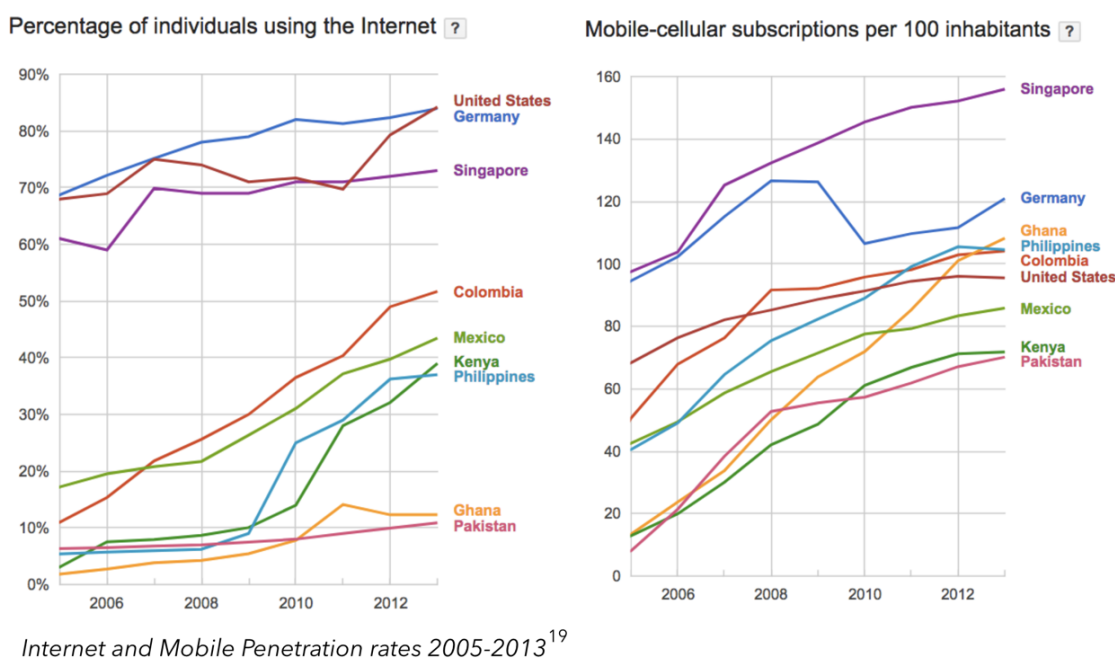
2. High-level analysis: Key findings

Our team of researchers obtained and tested the Free Basics app in six countries, with programs from five different operators: Colombia (Tigo), Ghana (Tigo), Kenya (Airtel), Mexico (Virgin Mobile), Pakistan (Telenor), and the Philippines (Globe). Towards the end of our research period, we learned that Telcel, one of the largest operators in Mexico, had begun offering Free Basics. Mexico

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[18]"Our Impact", Internet.org, https://info.internet.org/en/impact/
[19] ITU ICT Eye, https://www.itu.int/net4/itu-d/icteye/FocusAreas.aspx?paramWorkArea=WTI

researcher Giovanna Salazar was not able to conduct a new case study on the Telcel version of the app, but did make some preliminary observations of the app which we included in our analysis as appropriate.

In consultation with expert colleagues from the internet policy, access and ICT4D sectors, we developed a methodology that examined the acquisition and setup of the app, quality of connection, language and accessibility, terms of use and data-related policies, and the content of the app itself. The full methodology can be found in Appendix 1.

We sought to build an objective, detailed picture of what this app looks and feels like for users in these six countries. In this section, we summarize our key findings from across the case studies. All case studies appear country by country, in full detail, in Appendix 2. All appendices and further reporting about our research can be found at https://advox.globalvoices.org/2017/07/27/can-facebook-connect-the-next-billion.

How do you get Free Basics?

A SIM card and data plan from an operator that offer Free Basics are necessary for use of the app. Once our researchers had obtained this, in some cases they had to download the Free Basics app from the Google Play store, using a pre-existing data plan or a WiFi connection. In other cases, the provider (such as Tigo in Ghana) automatically loaded the app to the phone once the SIM has been activated. Free Basics is also available for feature phones, but we did not test this version of the product.

In Mexico, in order for the app to work appropriately, the user had to have a specific smartphone model, noted in Virgin Mexico's terms and conditions.[20] Because Virgin operates within 850 MHz and 1900 MHz mobile communication bands, not all smartphones are compatible with their network. Virgin advertising indicates that the app will work with "any smartphone" as long as it is operating with a Virgin Mobile SIM card.

What happens when you launch the app?

Users who downloaded the app from the Google Play store were asked to give the app permission to access data from the following areas of their phone. The permissions screen for the versions we tested looks like this:

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[20] Virgin Mobile, "Terms and Conditions", http://www.virginmobile.mx/es/terminosycondiciones/
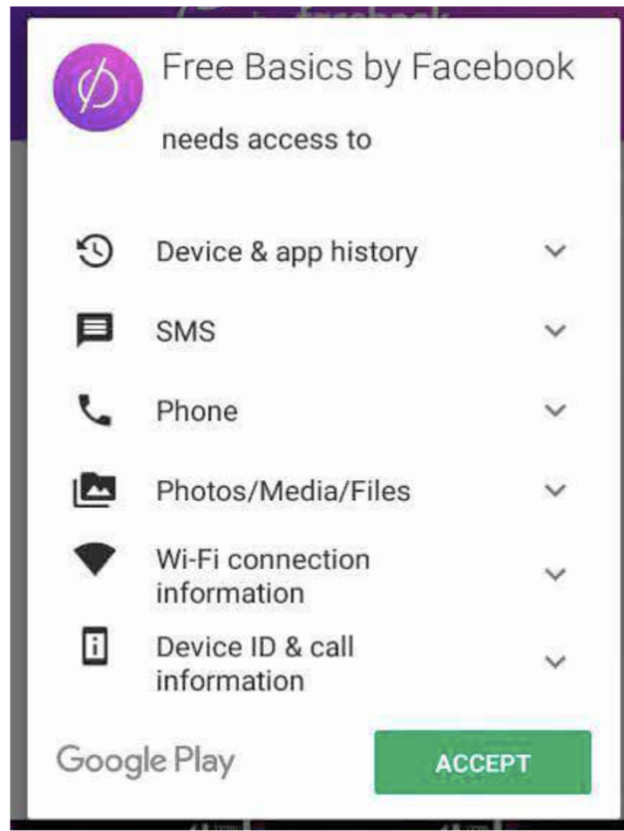
Free Basics in Pakistan, via Telenor

In Ghana, the app was automatically loaded to researcher Kofi Yeboah's phone when he activated his Tigo SIM card. In this case, the above permissions screen did not appear.

Upon opening the app for the first time, users were not asked for identifying information such as name, age, location or other key identifiers, with the exception of users in Pakistan, who were asked to input their location. It is worth noting, however, that many countries require that vendors register the SIM to the buyer, logging information such as their name, address and national ID number at the time of sale.

In Kenya, Ghana and Pakistan, users were highly encouraged to enter their Facebook login information (if they have an existing account) or to create an account, but could easily elect not to do so. In Colombia, researcher Monica Bonilla reported that certain third-party services in Free Basics were not fully enabled unless she was logged into her Facebook account.
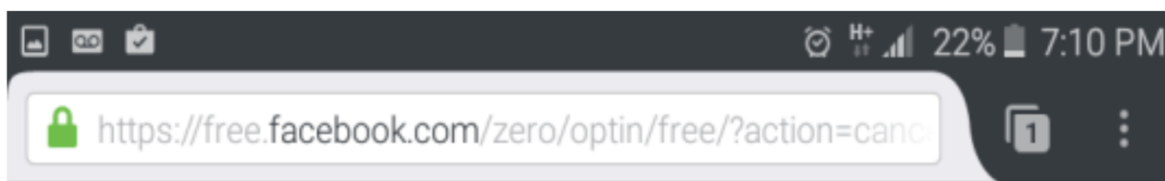
"Do you want to keep using data for Facebook?
Continue using your regular Virgin Mobile MX data plan to navigate Facebook.
[blue box]: Yes, use data
[grey box] Go back"

In Mexico, users who opted not to log into Facebook via Free Basics were asked if they were sure they want to continue using Virgin mobile data to access Facebook. This is a peculiar question for a user who had just selected "No thanks" when asked if they wanted to log into Facebook via Free Basics.

Users were then once again made to retreat (by selecting "Go back") and were redirected to the Free Basics' interface where they were asked to agree to Facebook's Terms of Use, its Data Policy and its Cookie Policy. Further analysis of Terms of Use and other policies appears in a subsequent section.

What is the quality of the connection?

The quality of speed and connection varied significantly from country to country, indicating that this may depend on infrastructure and/or particular elements of partnership agreements between Facebook and the local operator.

Our researchers in Colombia and Mexico reported that once installed, the app could not be used over a WiFi connection. It could be used only on the network of the participating operator.

In contrast, our researchers in Pakistan had significant connection problems and reported that the app encouraged them to use it over a WiFi connection. This begged the question: If users had access to a WiFi connection, through which they could browse millions of websites, why would they use Free Basics at all?

Language and accessibility

What languages does Free Basics speak? In all six of the case studies we conducted, the interface for Free Basics was offered in English and one other language, typically a national language spoken by a majority or plurality of people in the country.

- Colombia: English, Spanish
- Ghana: English
- Kenya: English, Kiswahili
- Mexico: English, Spanish
- Pakistan: English, Urdu
- Philippines: English, Tagalog

However, most services offered within the app were available in just one language. For example, while users in Kenya could choose an interface in either English or Kiswahili, nearly all of the services offered were in English only. Although the Pakistan version contained multiple services in Urdu, our researchers noted that the particular font used for the Urdu interface made the script very difficult to read.

In Ghana, all sites and services were in English, despite the prevalence of other languages in Ghana, such as Hausa and Twi. Similarly, while the Pakistan version offered settings and sites in both English and Urdu, other prominent languages such as Punjabi and Pashto were not represented.

In Colombia and Mexico, services were offered only in Spanish and English, failing to account for the needs of users in both countries who primarily speak and read indigenous languages, such as Nahuatl in Mexico.

The Philippines has 170 languages, 12 of which are considered major languages. English is also commonly used in written communication in the country. Internet users in the Philippines interact primarily in English, Filipino and Taglish (a mix of Tagalog and English).[21] The Philippine

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[21]Wikipedia.org, "Filipino Language", https://en.wikipedia.org/wiki/Filipino_language

versions offered several sites and services in Taglish, which is not an official language but is a very common parlance.

What features does it offer for the visually impaired? What features does it offer for illiterate and semi-literate people? Most of the content offered on the versions of Free Basics that we tested is text-heavy, and many of the websites have removed images and video in an effort to decrease the overall amount of data being sent over the network.

While and semi-literate users would likely find some value in the app, as it offers some services such as games that are text-light, they likely would see less benefit from the services than literate populations. We surmise that without additional phone features that offer voice and audio assistance, illiterate and visually impaired users would derive little utility from the app.

For those who are only literate in regional languages that are not represented in the app and its services, the same problems arise.

What content (websites and services) does the app offer? All versions of the Free Basics app that we tested offered a fixed set of services best described as apps within an app. These appeared in two separate areas of the app, which we refer to as tiers. The first tier could be found on the main screen in list form.

Tier One. As promised in Free Basics marketing narratives, the prominent topics for sites in Free Basics focused on news, health information, financial advice, job search sites, learning and education tools, and apps intended to educate women about health, finance and parenting. There were also services devoted to communication, social media and sports.
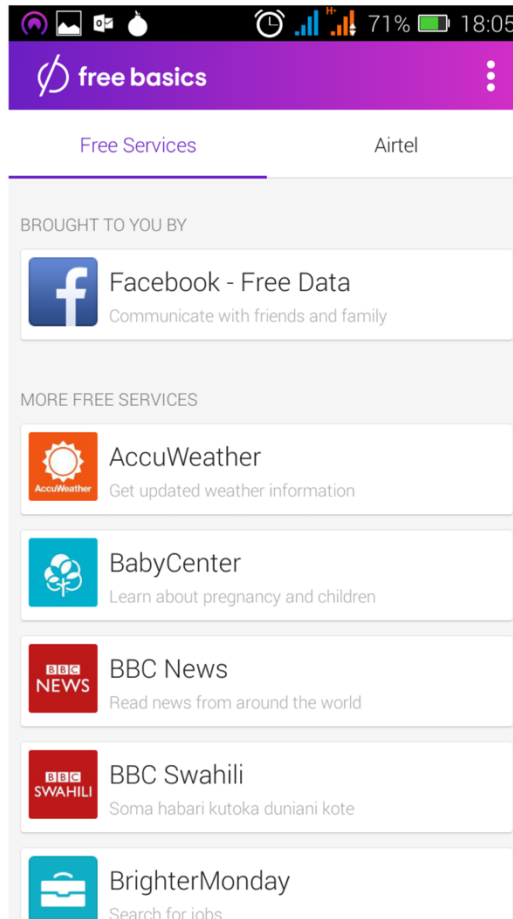
Tier One, "Free Services" for Kenya

The Facebook application appeared first on the list, and was denoted as the provider or benefactor of the application. It was followed by an alphabetized list of mostly third-party services. Each application was represented by its name, a small graphic icon and a description of six words or less.

In every Free Basics package that we tested, certain apps always appeared in Tier One. They were:

- AccuWeather – Weather information and prediction from AccuWeather Inc, a US company

- BabyCenter* – Tips on infant health from Johnson & Johnson, a US health and baby product company

- BBC News – Access to news in English or local language from the UK national news agency

- Bing.com** – Search engine owned and operated by Microsoft, a US technology company

- ESPN* – Sports news and coverage from the US sports network

- Facebook Messenger – Facebook's messaging app

- Money Matters – Finance tips from ChangeCorp, a US company that develops mobile app content targeting "middle class consumers in emerging markets"[22]

- SmartBusiness* – Business tips from ChangeCorp

- SmartWoman* – Health and finance tips for women from ChangeCorp

- Wikipedia – free, online, crowd-sourced encyclopedia

Denotes websites that did not appear in the Pakistan version of Free Basics
**Denotes websites that did not appear in the Mexico version of Free Basics*

Eight out of 10 of these apps belong to for-profit companies based in the US. Alongside these offerings are what appear to be region or country-specific sites and services.

These varied significantly from region to region. While the Kenyan version of the app offered access to over a dozen locally and regionally based services, the Mexican version via Virgin Mobile offered access to just two local sites: job recruitment site OCCMundial and CREA Comunidades de Emprendedoras, an NGO for women entrepreneurs. On the other hand, the Mexican version via Telcel offered access to just one local website: that of Fundación Carlos Slim, the foundation of billionaire Carlos Slim, who is the CEO of Telcel.

Tier Two. In the versions we tested, curious users would notice three dots in the upper right-hand corner of the main screen. If the user selected these dots, a drop-down menu appeared that offers a few different options including "More free services."

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[22]"About", Change Corp, http://change-corp.com/about
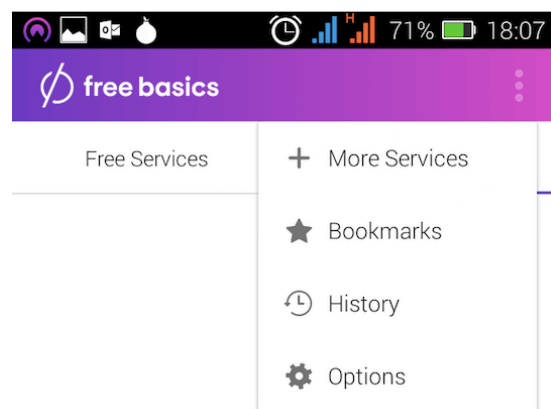
When selected, a much longer list of sites (listed in the same fashion as the services on the main screen) appeared. In all countries where we tested the app, this list included just over 150 options.[23]
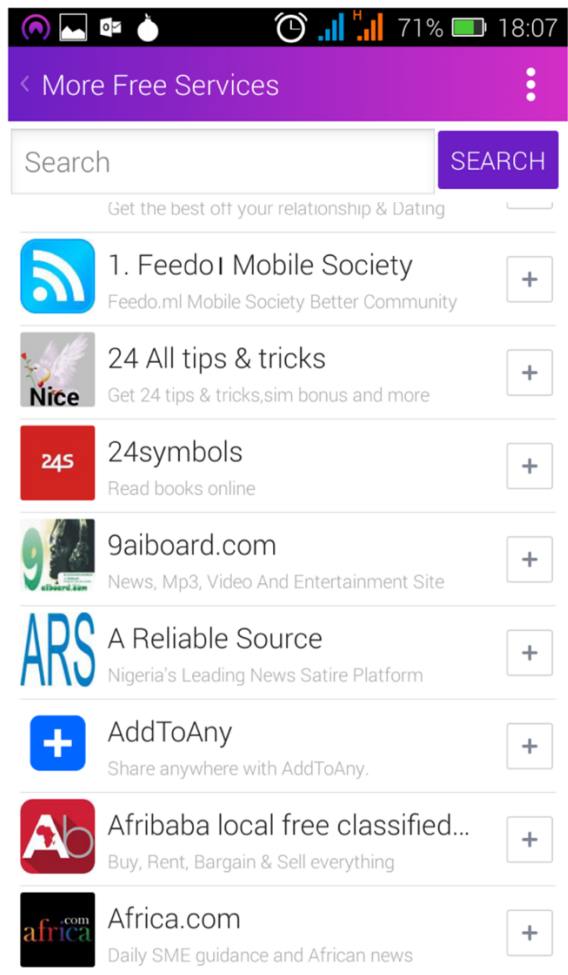
Tier Two "More Free Services" for Kenya

We do not know why content on Free Basics is offered in two separate tiers, giving users instant access to Tier One, while leaving the other offerings tucked away. While some services featured in Tier One pertained to the target country or region, several of the standard applications featured in the first screen had no special relevance to the regions in which they appear. When we asked Facebook why the app has this distinction, they declined to answer.

Facebook has told us that there are more than 1,000 services offered on Free Basics across the

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[23] The BBC service has a cookies policy through which they collect certain data about the user in order to enhance the user's future experience. This cookie policy is in English despite the service being a Kiswahili service. The user is therefore required to read and accept these cookies as part of the service, while their 'Terms of use' are written in Kiswahili.

globe, and that developers who submit their material to Free Basics are asked to select relevant countries and regions for their app, and that they are also free to select a global option.

Our team did not conduct an exhaustive review of the content offerings of each version of Free Basics. We chose instead to document all offerings (see Appendix 3), identify trends in the types of content offered, and measure these trends against principles of access to information, freedom of expression and media freedom. Here, we offer some high-level observations from this review.

Health information: The health-focused sites and services on Free Basics included:

- 1doc3[24] (Colombia, Tier One) – A Colombian startup that allows users to submit health questions to a network of certified medical doctors who will give a response in short order.[25]

- Facts for Life[26] (Kenya, Tier One) – A platform and app developed by UNICEF that provides a range of information about health, nutrition and parenting.

- BabyCenter (all versions except Pakistan, Tier One) – A prenatal and neo-natal care information website owned by Johnson & Johnson, a US company that makes over-the-counter hygiene and baby products.

- WikiHow[27] (multiple versions, Tier One) – A Wikipedia-like model in which any volunteer can submit information for inclusion in the app. Some articles in the health section are reviewed by medical professionals, while others are not. Some of the articles appear to target a primarily US-based audience. For example, an article entitled "How to Access Your Electronic Medical Records" describes the process for obtaining records protected under the US Health Insurance Portability and Accountability Act (HIPAA).[28]

Apart from UNICEF, there were no government or international health expert organizations represented in the Free Basics versions that we studied.

Learning and research:

- Wikipedia (all versions, Tier One) – Wikipedia allows users to see and search for information,

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[24] 1Doc3, https://www.1doc3.com/

[25]"1DOC3 applies cognitive computing to answering medical questions," IBM Cloud Stories, August 2016, https://medium.com/cognitivebusiness/1doc3-teams-with-facebook-to-reach-low-income-communities-b43a2a7a6a52

[26] Facts for Life, http://www.factsforlifeglobal.org/

[27]Wikihow, "Health", http://www.wikihow.com/Category:Health

[28] WikiHow, "How to Access Your Electronic Medical Records," http://www.wikihow.com/Access-Your-Electronic-Medical-Records

but not to edit it. However, nearly all external links cited in Wikipedia articles were inaccessible for Free Basics users.

- Jamii Forums (Kenya, Tier One) – The Kenyan version of Free Basics included the Tanzanian news commentary and user-generated content site Jamii forums (often compared to Reddit), which is independently owned and known for hosting controversial political content and leaked documents. The inclusion of Jamii in the Free Basics package could be seen as an indication of openness on the part of Facebook and its Kenyan partner Airtel. If either company had been pressured to omit content of a political nature, Jamii would likely not appear.[29]

Kenya researcher Njeri Wangari Wanjohi noted that Jamii is mostly used by Tanzanians, and that Kenyans in contrast engage in discussions like this on forums such as Mashada and Kenyatalk, neither of which are included in Free Basics. We surmise that Jamii's developers asked to be included for all versions of Free Basics in East Africa.

- Bing (Tier One in some countries, Tier Two in others) - The search engine was available on most versions that we tested. Of course, it has limited utility, given that nearly all links that appear in search results are inaccessible for the user. As with Google, Bing search results increasingly include search engine-generated information alongside links to third-party websites. This could prove useful to users, as it would allow them to see additional information without needing to access sites listed in the search results. It also could result in users becoming over-reliant on this type of information, in the absence of the ability to search and freely access full web content.

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[29]Ndesanjo Macha, "#FreeMaxenceMelo: Authorities Charge Tanzanian Whistleblowing Website Owner Under Cybercrimes Law," December 2016, https://advox.globalvoices.org/2016/12/16/freemaxencemelo-authorities-charge-tanzanian-whistleblowing-website-owner-under-cybercrimes-law/
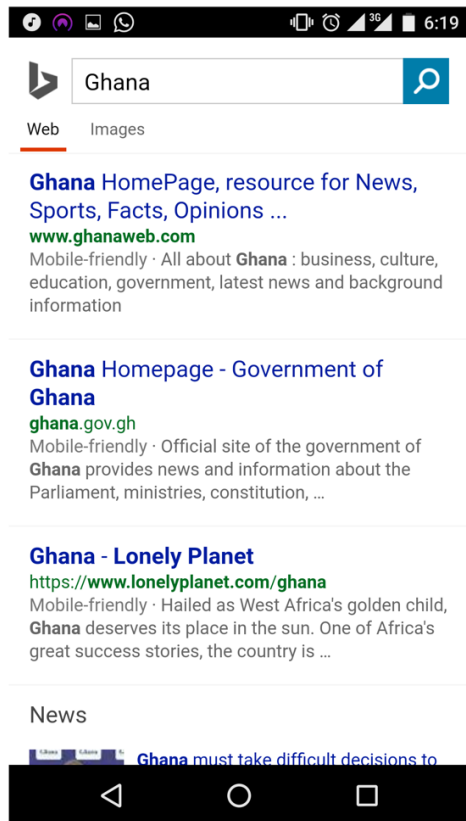
A Bing search in Ghana
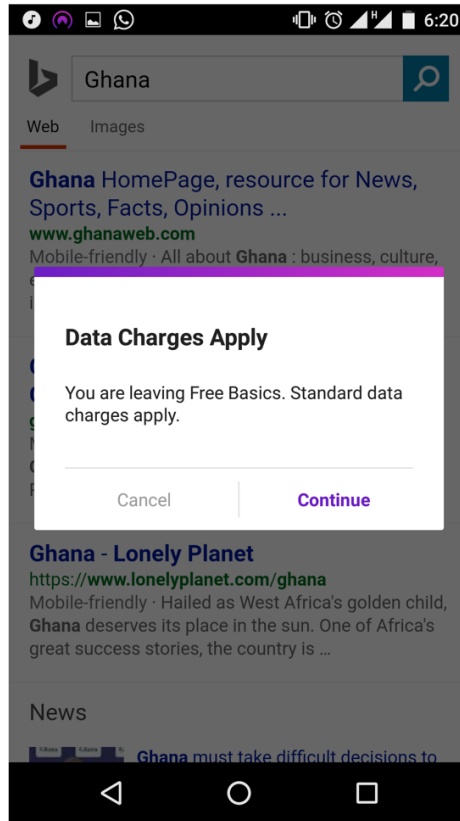
After selecting a link, the user is told that standard data charges will apply

News: Each version of the app had unique offerings when it came to news, and these are further articulated in Appendix 1, but there were some noteworthy cross-cutting trends. Primarily, the news sites that users find in Tier One are split between international sources (mainly BBC.com and ESPN) and between one and three national-level news sites of varying quality and reputation. While some featured reputable daily newspapers, others offered websites that repackage or republish content from other sources, sometimes of questionable journalistic merit.

- Colombia: The only local news site offered in Tier One for Colombia was El Tiempo, the national newspaper with the largest circulation in Colombia and the flagship publication of media group Casa Editorial El Tiempo (CEET), which is primarily owned and led by Colombian businessman Luis Carlos Sarmiento Angulo, who is the richest person in Colombia. Although it has no explicit "political affiliation," the CEET group has strong political and business ties with the ruling party.

- Ghana: Tier One news sites included in the app were Ghana Web and Ghana News. Both of

these local media outlets are known for sensational coverage and repackaging of stories that have already been reported elsewhere. They are not known for high journalistic standards.

- Kenya: The only local news site offered in Tier One for Kenya was Daily Nation, a publication of the Nation Media Group (NMG) owned by the Agha Khan. Daily Nation is one of Kenya's leading independent newspapers. However, there have been a number of altercations between the NMG management, editorial team and the current Kenyan government under the Jubilee party. Although the newspaper has been largely critical of the government, this has led to pressure from the government to sack journalists and cartoonists, including Gado, one of Africa's best-known cartoonists.[30]

- Mexico: The only local news site offered in Tier One for Mexico was El Universal, a privately owned daily newspaper that has been criticized in recent years for showing bias in favor of the current administration of President Enrique Peña Nieto.[31]

- Pakistan offered two local news and information sites: Geo News and Hamari Web.

   ◦ Geo News is known for independent reporting in both English and Urdu, and is owned by the Karachi-based Jang Group, a subsidiary of Independent Media Corporation.

   ◦ Hamari Web is a locally owned business, entertainment and employment information and news website with content in Urdu and English.

- Philippines: The Philippine version of the app offered a more robust selection of news sites, when accounting for both Tiers One and Two. In addition to giving users access to various local daily news outlets including the Philippine Star, the Inquirer, and the Sun Star, it also included the local independent site Rappler, which has a strong reputation among digital journalists.

In Tier Two, most versions featured a range of news sites, with varying relevance for the target

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[30]"Pencil blunted: a celebrated cartoonist loses his strip," The Economist, March 2016, http://www.economist.com/news/middle-east-and-africa/21695400-celebrated-cartoonist-loses-his-strip-pencil-blunted.

Catrina Stewart, "Aga Khan accused of squeezing Kenya press freedom after newspaper sacks cartoonists and journalists," March 2016, http://www.independent.co.uk/news/world/africa/daily-nation-aga-khan-accused-over-squeezing-kenya-press-freedom-after-newspaper-sacks-cartoonist-a6943171.html

[31]Andres Lajous, "Por qué dejé de escribir en El Universal," Animal Politico, December 2012, http://www.animalpolitico.com/blogueros-espacio-en-disputa/2012/12/03/por-que-deje-de-escribir-en-el-universal/

user. For example, the Mexican version also offered access to the following news outlets:

- Deutsche Welle in Spanish

- Voice of America in Spanish

- BuzzFeed News

- Various editions of Xataka, a Latin American technology site

- Reuters in English

- Necochea news, a regional news outlet in Argentina

- TrendyRammy, a Nigerian entertainment news site

- 24/7 News Nigeria, a Nigerian news site

The variety of news sites listed here provides a glimpse of what we commonly found among Tier Two offerings. This is presumably the result of Facebook's open submission process for the app, in which developers may select specific countries or regions in which their app can appear. While it is conceivable that users in Mexico would want to read most of the outlets included here, it is difficult to imagine them being drawn to Nigerian entertainment news or even to regional news in a city 500 kilometers to the south of Buenos Aires, Argentina.

Public services. Across the versions we tested, we found very few applications for public services, even in countries such as Kenya and Mexico that have demonstrated a strong commitment to developing e-government services, such as eCitizen in Kenya. The only services we found across all six studies were Philippine state guides to public education and transport and the Philippine government gazette.

Social media. On all versions that we tested, Facebook was the only social media app available among the world's top 15 most popular social media platforms.[32] Other social media apps were generally location or language-specific, such as ConnectAmericas in Mexico and Colombia.

Researchers described the version of Facebook offered via Free Basics as a "stripped down" variant of the full site that omits multimedia such as photos, gifs and video, with the exception of user profile photos. In some cases, including the Philippines, users experienced a limited view of news stories from media outlets that publish on Facebook. They were able to see headlines, but not the

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[32] "The world's most popular social networks, mapped," World Economic Forum, March 2017, https://www.weforum.org/agenda/2017/03/most-popular-social-networks-mapped/

full text of an article.

What policies (i.e. terms of use, privacy) are users asked to accept?

The terms of use and the privacy and data collection policies presented to users disclosed certain practices of Free Basics and the telecommunications operators they partner with. They differed from country to country, in language and in the ways that they were displayed to users.

At a later stage in this project, we plan to explore these policies in greater depth in partnership with local NGOs that specialize in this area of law. We encourage other experts to do the same.

In all countries, when our researchers launched the app for the first time, they were told that by subscribing to the service, they were agreeing to terms, which were referenced and hyperlinked at the bottom of the screen (as seen below). The description of these terms varied from country to country and operator to operator
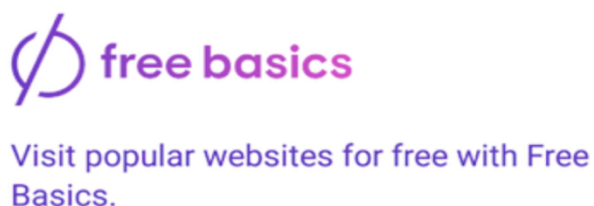

Notification of terms in Colombia, via Tigo:
"Visit Visit popular websites for free with Free Basics.
By using Free Basics, you accept **Facebook's Terms of Use**,
the **Data Policy** and the **Cookie Policy**. You may receive text
message notifications from Facebook. You may deactivate
these whenever you wish. **More information about privacy
on Free Basics.**
If you click "Continue" [below], you also accept the **Conditions
and Privacy Policy** of Tigo."

Notification of terms in Ghana, also via Tigo.

In all cases, this screen presented three policies on terms of use, data and cookies use, all of which were written as agreements between the user and Facebook—not Free Basics or Internet.org.

Multiple researchers in the group were perplexed by the app's emphasis on agreements with Facebook, given that the product was branded as "Free Basics" and that it includes a range of websites that are not owned or operated by Facebook.

Ghana researcher Kofi Yeboah summarized his experience as follows:

> The user agrees to the terms of Facebook, instead of Free Basics…. This seems peculiar, given that one does not need to create a Facebook account in order to use the program. It is easy to imagine that a first-time user would be uncertain as to whether the Free Basics app is the same as the Facebook app…

In addition to these agreements, there is a privacy policy that applies uniquely to Free Basics, which users can access by clicking "Learn more about privacy on Free Basics."[33] While this agreement applies only to Free Basics users, it is an agreement between those users and Facebook, whether or not they have signed up for the platform.

Given that Free Basics functions as a set of apps within an app, what does this mean about the different types of data and traffic traveling between the user and the apps that they choose to use?

After Colombia researcher Monica Bonilla read a few news articles on Colombian national daily news site El Tiempo about a specific topic, she found that when she opened Facebook, there were four items related to that same topic appeared in her feed.

Drawing on this experience and the indications of the various ToU and data policies, we presume that Facebook either used cookies, or traffic collected from its centralized proxy server (through which all Free Basics traffic – for Facebook and all other sites in the package – travels) to inform its choice about what to put into Monica's newsfeed.

These findings suggest that Free Basics is providing Facebook with previously untapped streams of data about online behavior. The centralized infrastructure of the system allows the company to capture data about Free Basics users, regardless of whether they have accounts with Facebook or not. One can imagine that this is particularly valuable for Facebook and other companies in the data and ad tech market ecosystem, where they presumably want to increase their user base, as more

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[33] "Privacy on Free Basics," https://www.facebook.com/legal/internet.org_fbsterms

people gain access to online services.

This also suggests that Facebook, by functioning as the sole provider of access to the unique technical infrastructure that allows users to access these sites and services, is performing functions that go far beyond the realm of social media and are much closer aligned with those of a telecommunications operator or a browser.

Importantly, the company ensures in its terms and data policies that all app traffic is encrypted as it travels between their proxy servers, the servers of third-party sites/app-within-app providers, and users. Consistent with Facebook's practices across its sites and services, this technique significantly diminishes the risks of hacking or unwarranted snooping on the activities of users.

As with the company's other services, some additional user data can still be accessed by law enforcement through relevant cross-border legal mechanisms that require court approval. If the data centers for Free Basics are located primarily in the US, Sweden and Ireland, as are Facebook's data centers for other operations, this configuration would raise barriers to requesting and accessing Free Basics user information stored on Facebook's servers.[34]

3. Analysis and further research

Our primary aim in this project was to provide a more detailed and nuanced picture of Free Basics for those involved in research, advocacy or business development aimed at bridging the Internet access divide. We sought to answer the following questions:

- Is Free Basics being used by the people it is intended to serve?
- How well does it serve local interests and needs?

Is Free Basics being used by the people it is intended to serve?

The utility of Free Basics is predicated on the assumption that substantial proportions of local populations are disconnected from the internet *only* because they cannot afford to pay for mobile data. Facebook's theory of change says that individuals will choose to pay for internet access if they

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[34]Yasmeen Abutaleb and Joseph Menn, "Exclusive: Egypt blocked Facebook Internet service over surveillance," Reuters, April 2016,
    http://www.reuters.com/article/us-facebook-egypt-idUSKCN0WY3JZ

can understand the benefits it will bring them.

This rationale rests on a hypothesis that 1) Free Basics will primarily reach people who have never or seldom used the internet; 2) the experience of using Free Basics will illuminate for them the value of having internet access; and 3) it will motivate them to pay for internet access.

"Our Impact" - Internet.org

The aforementioned survey of 8,000 Free Basics users by the Alliance for Affordable Internet (A4AI) suggests that this theory of change may not hold for the majority of users of the app. Rather, it indicates that its users represent a mix of interests and motivations when it comes to their choices on how to engage with the app and other forms of access.

A4AI found that only 12% of users of Free Basics had never used the internet before obtaining the app. Across eight countries surveyed, approximately 35% of users rely on the app not as a primary means for going online, but rather as a supplement to other means of connection such as regular data plans and public WiFi. In her qualitative research on user perceptions of Free Basics and Wikipedia Zero in Ghana, Genevieve Gebhart found that "respondents shared a clear perception of Free Basics and Wikipedia Zero as operator promotions."[35] This observation was reinforced by A4AI's

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[35]Genevieve Gebhart, "Zero-rating in emerging mobile markets: Free Basics and Wikipedia Zero in Ghana," University of Washington School of

findings: 28% of all zero-rating users became paying customers after using the app.

Virgin Mobile's website advertising the Free Basics App in Mexico. "Free Basics by Facebook. Surf Facebook at no extra cost with Free Basics. Connectivity for All." http://www.virginmobile.mx/es/free-basics/

Our qualitative research yielded similar conclusions: In individual interviews with users in the Philippines, Pakistan and Mexico, our team found that users saw Free Basics not as a primary avenue to online platforms, but rather as part of a broader strategy for maximizing their opportunities to use online platforms. Our researchers also observed that advertising by telecommunications firms offering the program seemed consistent with this interpretation, targeting users such as urban millennials who would benefit from a little extra data in order to satisfy their needs.

Reporting by Sheera Frenkel and Caroline O'Donovan for BuzzFeed also supported this conclusion. In an interview with BuzzFeed, Antonia Graham, head of Digicel in Panama, explained that paying accounts that run out of data are automatically pushed to the Free Basics webpage.[36]

Reach depends on market competition

In both Pakistan and the Philippines, the two dominant providers in the country offered the app. In these and presumably other countries with similar market structures, any person with a working

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Information, August 2015.
https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/37299/Gebhart%20ICTD%20author%20final.pdf?sequence=1

[36]Sheera Frenkel and Caroline O'Donovan, "Here's How Free Basics is Actually Being Sold Around the World," BuzzFeed news, January 2016,
https://www.buzzfeed.com/carolineodonovan/heres-how-free-basics-is-actually-being-sold-around-the-worl?utm_term=.dlMOb3BJZ6#.bo4O2WYKJZ

mobile phone has the opportunity to use these services at a cost equal to that of a regular talk and text package. In these contexts, the app may be more likely to reach those who do not have other means of accessing the web.

Facebook's strategy appears less effective in countries where only operators with a relatively small market share offer Free Basics. Mexico serves as a strong counterexample to the case of the Philippines. Until late May 2017, Virgin Mobile was the sole provider carrying Free Basics in the country. Only 850 MHz and 1900 MHz smartphones are compatible with Virgin's network, and the company only has points of sale in major cities, leaving multiple obstacles for potential users, particularly in rural areas. Researchers and interviewees in Mexico reported that Virgin appeared to be promoting the service primarily to millennials and young people as a way to get "free Facebook" and avoid exceeding their data limits due to frequent use of the platform.

To reach people who have not used the internet before, one would expect that in a country like Mexico, the company would work to make the product available in parts of the country that are significantly less connected, such as rural and comparatively low per-capita-income states like Oaxaca and Chiapas. Although Virgin Mobile has coverage in these states, it does not have any points of sale.

In late May 2017, Telcel began offering Free Basics. This is a game-changing move, as Telcel has broad coverage and the largest market share of mobile users in Mexico. Although this change came too late in our research process for us to study its impact, we anticipate that this will make the product much more accessible for poorer users in rural areas.

From there, some users may indeed choose to increase their spending in order to obtain a full access data plan. But others may not. One can imagine that a user with limited resources would be glad to take advantage of the offerings of Free Basics, and would continue to do so, without changing their purchasing behavior. Recent research on Free Basics by LIRNEAsia showed that users in Myanmar had this precise experience. Out of 40 Free Basics users, only four were familiar with the offerings of the app outside of Facebook itself. The Sri Lanka-based research group concluded:

> ...the promotion serves as an 'on-ramp' to paid data consumption, although not to the 'open Internet': users pay to continue using Facebook.
>
> […]
>
> Our findings raise concern of Facebook's influence within Myanmar, as these zero-rated

promotions may serve to perpetuate its dominance and undermine widespread understanding of the distinction between its services and the 'open Internet'.[37]

This benefits Facebook and participating services, as they continue to collect and profit from user data, while users remain primarily in the closed environment of Facebook, rather than transitioning to the global, relatively open internet.

How well does the app serve the populations for whom it is intended?

Here we summarize the conclusions we've drawn about Free Basics from our six case studies. On the whole, as we mention above, Free Basics provides users with access to Facebook, along with two tiers of third-party services that vary in their utility for users, depending on their local relevance and the language/s in which they are offered.

1. Language: Free Basics does not meet the linguistic needs of target users. One of the biggest hurdles for potential internet users across the world is that of literacy and competency in dominant languages on the internet. Of the thousands of languages spoken and written across the world, relatively few have robust representation online. The lack of linguistic diversity online is compounded by the accessibility challenges facing the world's illiterate and visually impaired populations, who depend on special services to use technological tools online, which remain overwhelmingly text-based. Without question, a lack of linguistic diversity online creates higher barriers to entry for people who are coming online for the first time.

Free Basics does not stand out in this milieu. The versions we tested offered interfaces in English and one other language for each country. They did not reflect the linguistic diversity of countries such as Pakistan and the Philippines, where there are multiple dominant languages spoken and read by millions of people. The content offerings in the app were similarly limited to the one to two dominant languages in each country.

The combined lack of diversity in language offerings and lack of services for illiterate and semi-literate populations are likely counterproductive to Facebook's intended goal of reaching populations that are not yet using the internet. On average, these populations are less well-educated, more likely to be semi-literate, and often more familiar with regional languages than with dominant ones which tend to reflect pre-existing structures of political power and influence.

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[37]Peter Cihon and Helani Galpaya, "Navigating the Walled Garden: Free and Subsidized Data Use in Myanmar," LIRNEAsia, March 2017.

2. Content and usability: Free Basics features an imbalance of key sites and services. By allowing any site or service to seek inclusion in the app via their open submission model, Free Basics has brought some modicum of democratization to their content offerings. However, the technical specifications for inclusion in the app may set too high a barrier for sites and services with limited technical staff, a common characteristic of small, independent platforms.

Facebook told us that as of June 20, 2017, there were over 1,000 sites and services included in Free Basics worldwide. Of the small sample of versions that we've seen, we've observed a mix of educational, vocational and finance-related websites, along with entertainment, gossip and sponsored content sites. In some versions, our researchers found that a plurality of sites offered are relevant to their region and appeared in the dominant languages of their country. In others, users found a glut of region-specific content from far away parts of the world, such as the Nigerian entertainment news sites included in the Free Basics version for Mexico.

Free Basics also lists all content offerings in alphabetical order.[38] While this may be helpful to users who know what sites they want to visit, it could be confusing or overwhelming for a first-time user. The actual results of this process have left users with a range of sites and services that don't reflect anything in particular, except the will and technical capabilities of their creators.

Free Basics appears designed to offer users a small slice of what is available on the global internet. But this is a difficult idea to put into practice, due to the closed nature of the app and the technical requirements that developers must meet in order to include their material in the app.

No social media sites, except Facebook. Free Basics includes none of the world's 15 most popular social communication platforms that lie outside of the Facebook ecosystem. It does not include an email platform. Did Facebook or other partners conduct proactive outreach to encourage certain platforms or services to submit their content for the app? When we asked the company this question, they declined to answer.

In every version of Free Basics that we tested, a plurality of the Tier One sites and services came from privately owned companies in the United States. This may be consistent with the overall trend in content across the global internet when China-based platforms are removed from the picture. Nevertheless, it is worth considering the implications of sources on everything from weather and sports to infant care coming from the same country and from a relatively similar cultural, contextual

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[38]The new version of Free Basics offered in Mexico, via Telcel, divides content into topic categories, rather than listing options alphabetically. We have seen no other versions of the app that organize information this way.

and linguistic lens.

With the exception of Pakistan, all of our case studies included the BabyCenter app, built by US health and hygiene product company Johnson & Johnson.[39] While the app offers users practical health information, it also provides the company with profitable data on users' search behaviors and the interests and habits of potential customers. This could compromise the focus, scope and even accuracy of the information offered.[40]

3. Net neutrality: Free Basics violates net neutrality principles. The program divides third-party services into two separate sections or tiers. It offers a fundamentally imbalanced incentive structure for third-party services to participate in the program by setting unique technical requirements that are difficult for some developers to meet (particularly those with limited resources) and by requiring that user traffic be routed through Facebook's proxy servers, which allow the company to collect profitable metadata. This may create a disincentive for Facebook's competitors. Indeed Free Basics does not offer products from any of Facebook's major competitors in the social media landscape.

Regardless of why key social media and email services were omitted from the package, the impact of this omission is worth considering. Although we recognize that email is no longer a leading mode of communication for families and friends, it remains dominant in many professional sectors. We are genuinely surprised that the package does not include an email application that lies separate from a user's Facebook account and associated identity. This led us to wonder: If Facebook owned a popular email service, would this be included in the package?

On a similar note, the absence of Twitter from the package limits users' ability to connect to a broader global public on local or global issues of public interest. While Facebook and Twitter do offer many of the same capabilities and tools, it is well documented that when it comes to instantaneous and far-reaching information sharing across regions and countries, Twitter is the more effective platform.

4. Privacy: Free Basics gives Facebook new capabilities to collect user data. Facebook is accessing unique streams of user metadata from all user activities on Free Basics, not just the activities of users while they are logged into Facebook.

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[39]"About," https://www.babycenter.com/about
[40]Christopher Heine, "Why Johnson & Johnson Treasures BabyCenter's Data," AdWeek, April 2014, http://www.adweek.com/digital/why-johnson-johson-treasures-babycenters-data-156720/

The program has created substantial new avenues for Facebook to gather data about the habits and interests of users in countries where they aspire to have a strong presence, as more users come online. The app does this by strongly encouraging users to use Facebook and by collecting user metadata such as information indicating which third-party services Free Basics users access, when, and for how long.

Free Basics appears to create exclusive streams of data about the behaviors and activities of its users. When users agree to the terms of use for Facebook, they agree to allow Facebook to collect and benefit from data not only concerning their activities on Facebook, but also their behavior and habits within the Free Basics app.

When it comes to data collection, this affords Facebook many of the same benefits that an Internet Service Provider or browser can reap by collecting and analyzing users' traffic data. Users are only able to access information online if they are willing to send all of their data through the infrastructure of the company providing the service. For users who want to get online with Free Basics, Facebook makes and enforces the rules of the road, and is the primary benefactor of profits generated by user data.

Conclusion

We intend for this paper to seed further research on this and other initiatives to bridge the internet access divide. Our experience with the technical and informational ups and downs using Free Basics suggests to us that on the whole, there is much to be learned from user experience research internet access solutions that rely on infrastructural tweaks or data caps in order to keep costs down.

Here are some possible questions that might be answered by future research:

1. How do non-internet users experience and use Free Basics differently from those who have gone online before?

2. For users who first experience the web through Free Basics, how does the app shape their impression of the global internet?

3. What influences telecommunications operators to decide to work with Free Basics? What influenced operators that have decided not to work with Free Basics? How does Free Basics affect telecommunications market competition?

4. What are the experiences of developers creating services for Free Basics? What are their motivations, and how do they choose what services to put forth for inclusion in the app?

While there is still much to learn about how the app's intended users—people who have never used the internet before—experience Free Basics, research by the Alliance for Affordable Internet, Genevieve Gebhart and LIRNEAsia has brought valuable qualitative studies to bear on the question of how the app is most commonly used.

In objective terms—not the terms implied by Mark Zuckerberg (see p4) – we do believe that having access to some websites is better than having none at all. For most of the world's internet users, access is not ubiquitous. It is limited by technical and electrical infrastructure, technical and legal censorship, and economic, social and political barriers to getting online.

But the "some" internet offered by Free Basics is bound by limitations that are largely artificial. The operators that have partnered with Facebook to offer this service are covering the cost of giving users some additional data and Facebook has built technology that helps use this data in an extra-efficient manner, but the company chose to do this by building a closed environment wherein they have express control over data as it travels from the user to Free Basics and then to the third-party

service. This limits the reach of the application and prevents users from browsing freely. And it creates potential disincentives to participation for Facebook's competitors. All of this happens primarily in the service of Facebook's business model, which rests upon collection of data from users of its platform and other products.

We also know that worldwide, regardless of how open or free the internet might be in a particular place, Facebook is a primary destination for many millions of people online. Some of the other websites in the package, in particular Wikipedia, capture a great deal of global traffic as well. But these are often just points of entry for a user—the ability to find new information and follow links beyond the boundaries of these hubs (in the global internet) is one of the things that makes platforms like Facebook so powerful. Without the ability to follow a link, the platform becomes much less dynamic.

We are skeptical of Facebook's contention that this technology is truly serving as an "on ramp" to using the global internet, i.e. convincing people to purchase a data plan. There is not sufficient evidence to suggest that first-time users will be motivated to make this transition. And ample evidence suggests that most users of this technology had in fact used the internet many times before they had Free Basics. They were motivated to use the tool not as an intermediary step towards full internet access, but rather as a way to supplement their mobile data allowances while limiting spending.

With this in mind, we wonder what kinds of ideas first-time users will have about the internet, if Free Basics is how they become acquainted with the internet. How will people understand what lies beyond the confines of Free Basics? How will this formative experience affect their behavior if or when they do begin using the global internet?

We hope that other researchers will undertake field and survey research that can help answer these questions. We also hope that initiatives such as Free Basics and other piecemeal efforts to bridge the digital divide will not have the unintended consequence of delaying efforts to improve or build new infrastructure for broadband connectivity. We firmly believe that more than anything, home broadband connections to the global internet form the critical baseline for full participation in the internet not only as a consumer or poster of information, but as an actual creator of new technology and programs for the web. We look forward to continuing this conversation in the coming months and years, and invite interested researchers, NGOs and companies to join us in further exploration of these questions.

This research study is brought to you by

A project of Global Voices, Advox is a global network of bloggers and online activists dedicated to protecting freedom of expression and free access to information online. We report on threats to online speech, share tactics for defending the work and words of netizens, and support efforts to improve Internet policy and practice worldwide.

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