October 7, 2014

Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW, Room TW-A325
Washington, DC 20554

Via Electronic Filing

Re: Notice of Ex Parte Presentation, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, Policies Regarding Mobile Spectrum Holdings, WT Docket No. 12-269, and AT&T-DIRECTTV Consent to the Transfer of Licenses, MB Docket No. 14-90

Ms. Dortch:

On October 6, 2014, Jonathan Zuck, President of ACT | The App Association; Scott Weiner, Founder of Weiner Family Studios; Jeff Hadfield, Chief Experience Officer for Developer Media; Patrick Larsson, Founder of Happi Papi; Shaun Hainey, Founder of Volunteers in Education (VinE); Jill Thorpe, General Counsel and Vice President for Strategic Initiatives of Aframe Digital; Tricia McKenzie, Founder of StartDOT Handwriting; Steve Kohls, Founder of Mostly Zeroes Software; and Whitley Herndon, Policy Counsel for ACT | The App Association met with David Goldman, Senior Legal Advisor for Commissioner Rosenworcel, regarding the above proceeding.

ACT members are in town following the launch of Moms With Apps[1] to meet with policymakers and legislators about the app industry. During the meeting, ACT members discussed the importance of access to reliable and consistent broadband internet, especially in rural areas. Our request to the FCC is simple: we want better access to the internet in more places. To accomplish that, ACT is specifically asking for the release of more spectrum, reclaiming spectrum from those not using it, and support for programs and market incentives to bring better internet to rural areas, including the AT&T DirectTV merger.

Jonathan Zuck gave David Goldman a draft copy of ACT's study "State of The App Economy 2014," which found that 77% of the top grossing apps are made by startups and small companies and 78% are made by companies outside Silicon Valley. A copy of the report, along with other handouts, are attached at the end of this filing.

Shaun Hainey spoke about how access to internet is an education equalizer. Students who live in areas where broadband internet is not available are disadvantaged, even when internet access is available in their schools. Children cannot just be handed tablets loaded with software - connection to the internet is what makes those apps dynamic. Tricia McKenzie demoed her app, which helps young children learn to

[1] *Available at* www.momswithapps.com.

write their letters and numbers. The app can generate progress reports to allow parents and teachers to track achievement and Trisha to improve her app.

Jill Thorpe noted that with the aging of America, connectivity is key for families who are spread out and need the ability to look after and care for loved ones remotely. This requires that the devices used to communicate are able to connect and work anywhere in the country.

Scott Weiner stated that as a small business owner, he finds access to the internet for all Americans to be extremely important. Limitations on app download size and ability to download affects how app developers make and sell their apps. The always-on, always-available, seamless connectivity is critical for the growth of our industry. Better bandwidth means better apps -- apps that deliver healthcare data to doctors and progress reports to teachers.

ACT members represent a diverse group of people from all over the country. Our businesses, backgrounds, and passions are different but one thing we can agree on is that we need consistent and reliably fast internet all over the country and we support those programs and market incentives that accomplish that goal. We want significant amounts of licensed spectrum as well as continued improvements in unlicensed spectrum technologies and we need the FCC to do all it can to bring internet to underserved communities including approving the merger between AT&T and DirectTV.

Pursuant to Section 1.1206 of the Commission's rules, this letter is being electronically filed with your office. Please let me know if I can provide any additional information.

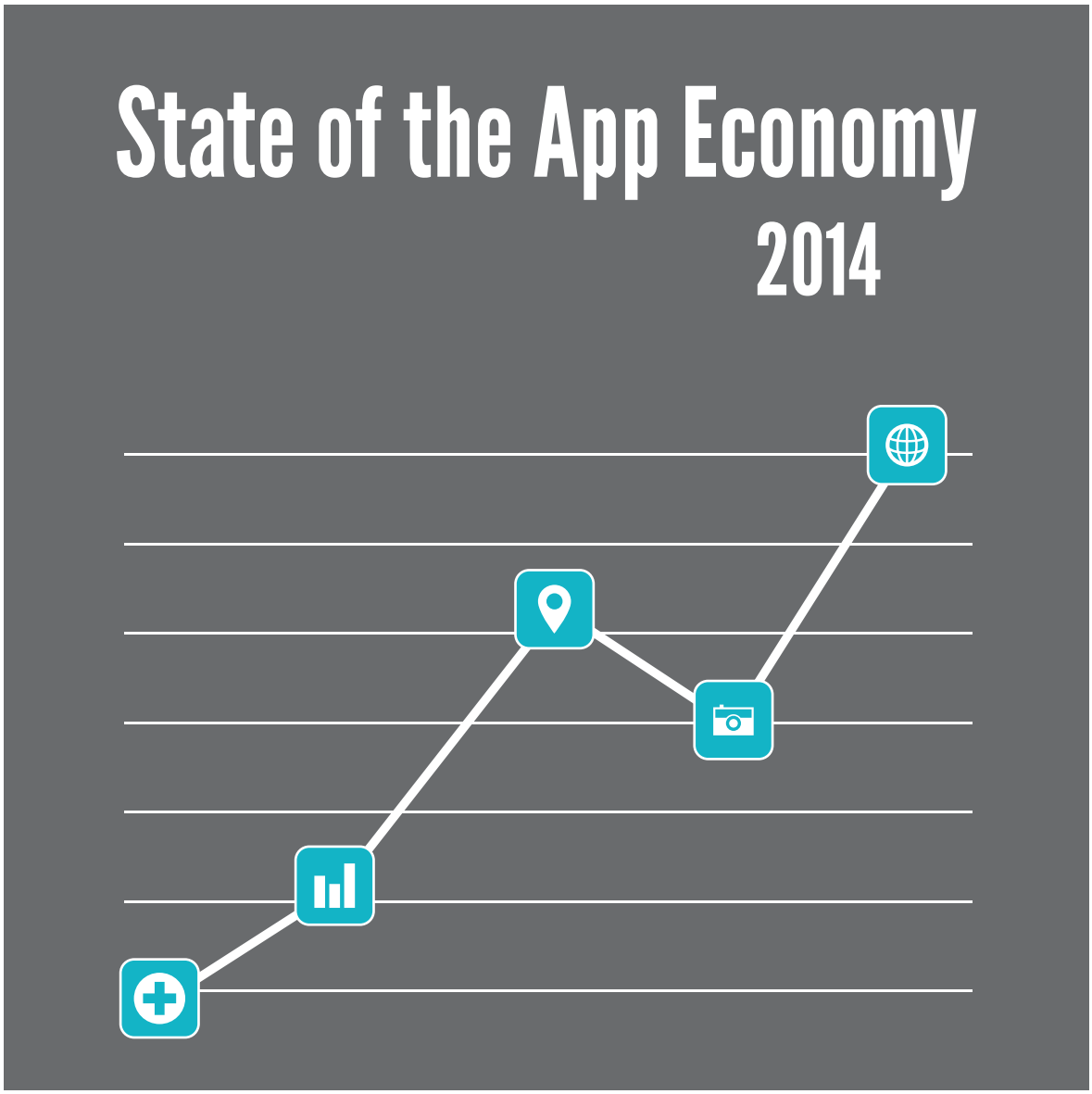
Respectfully Submitted,

E. Whitley Herndon
Policy Counsel
ACT

Attached:
State of the App Economy 2014
The Importance of Robust Networks
Cloud Computing

ACT | The App Association

State of the App Economy 2014



Jonathan Godfrey and Courtney Bernard

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Background

This is ACT | The App Association's third annual report on the mobile economy. In 2012, we published our first study, Apps Across America[i], a report originally requested by the Energy and Commerce Committee at the U.S. House of Representatives for its hearing, "Where the Jobs Are: There's an App for That." Last year[ii] we took a closer look at the Apple App Store on its five-year anniversary to chart the greatest influences impacting app economy growth.

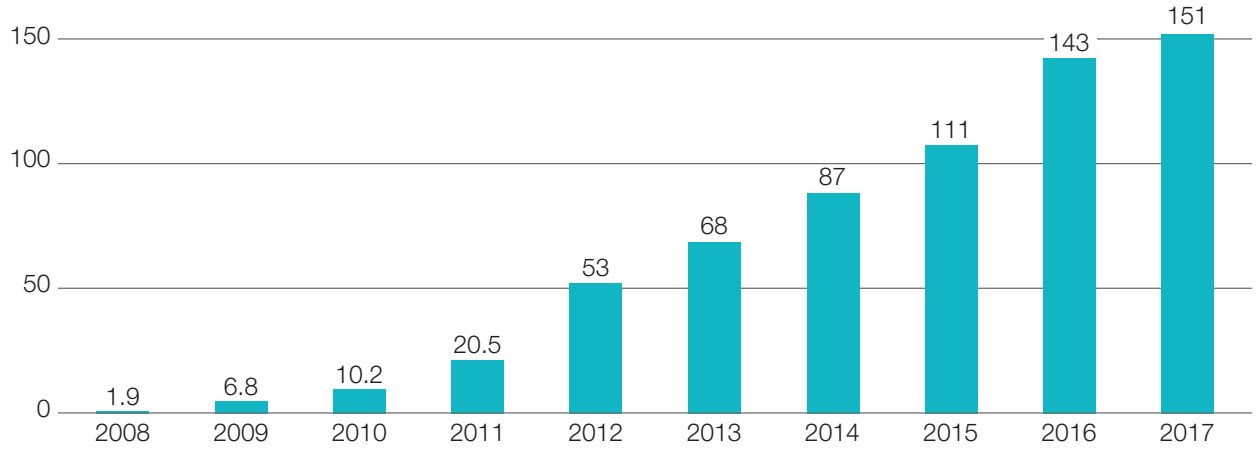
Only six-years-old, the app industry has grown at a tremendous rate that shows no signs of abating. Having risen to an $87 billion marketplace, analysts project growth beyond $150 billion by 2017.[iv] Much of this owes to incredible innovation by app makers that have harnessed the power of mobile connectivity to change the way we work, play, shop, and communicate.

Most recently we have seen advances in mobile technology that offers new ways for consumers to monitor their health and connect with medical professionals. We have also seen the effectiveness of interactive touchscreen displays in classrooms. As more schools adopt curricula that benefits from mobile devices, we have seen dramatic growth in education and children's apps.

To explore how the app industry has been evolving, we reviewed the top 650 apps across key categories in Google Play and the Apple App Store. In addition to the categories featured in our previous reports, we broadened our focus this year to include emerging areas such as Kids, Health, and Medical. We found that the app industry is growing and diversifying while creating jobs throughout the country.

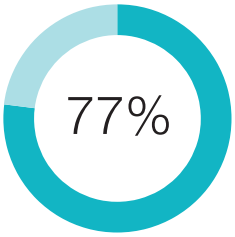
Growth of the Mobile App Economy

Total Revenue (in billions)

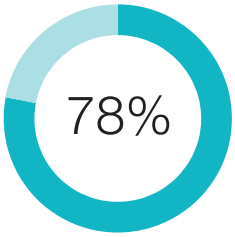


Findings

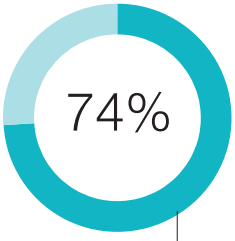
In our third annual review of the app industry, we find that small companies and startups continue to dominate the top rankings. Success is accruing to new entrants and nimble companies that are quick to respond to opportunities in the rapidly evolving mobile marketplace. Specifically, our research of the top grossing apps revealed that:



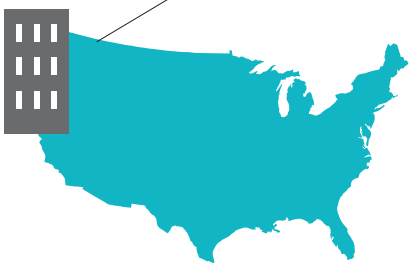
are made by **startups** and **small companies**

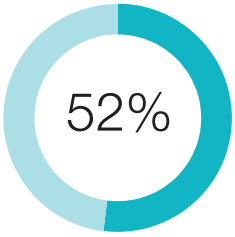


of U.S. companies are from **outside Silicon Valley**

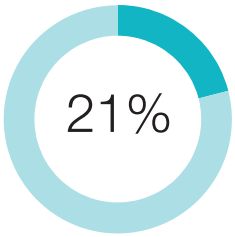


are from companies **located in the U.S.**





are made by **companies that are hiring**



in the China App Store **are from U.S. companies**

Size | Small Companies and Startups Dominate Market

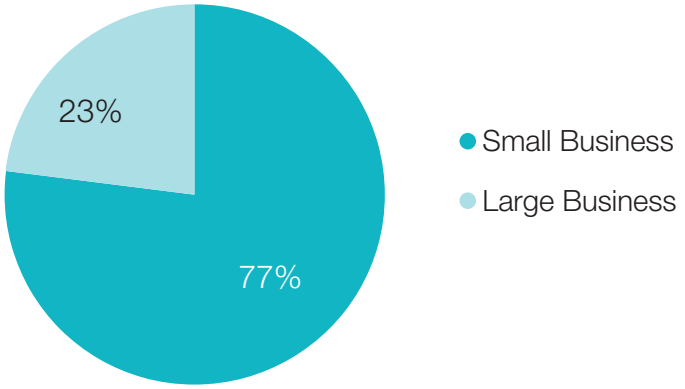
More than three-quarters of the highest grossing apps are produced by startups and small companies. We found that this dominance extended across all categories except games where it was nearly even, with big companies accounting for 51% of the top app makers.

It's a common refrain that small business is the innovation engine of our economy. If that's true then startups and small companies of the app economy are a turbo-charged jet engine of innovation. Product development cycles occur so rapidly in the mobile ecosystem that constant improvement is necessary to succeed. Small companies can be nimble and agile enough to continue adding new features and responding quickly to marketplace opportunities.

Companies like Cozi exemplify this flexibility. This Seattle-based company makes the productivity apps Family Organizer for iOS and Family Calendar & Lists for Android – both of which have consistently ranked in the top 10 throughout 2014. Cozi has updated its iOS version 49 times since 2010 to provide added features and services. The company was able to achieve this remarkable rate of evolution with fewer than 50 employees.

Small businesses lead app industry

Average Across All Categories



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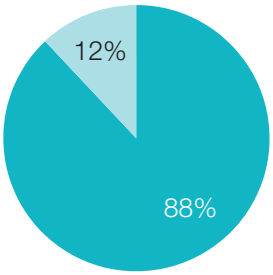
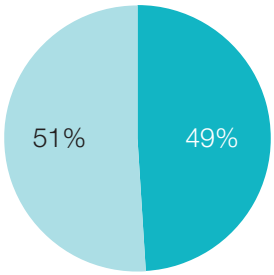


Games



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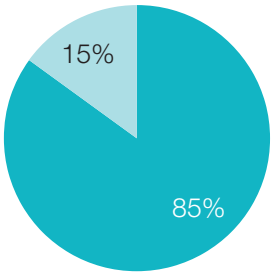

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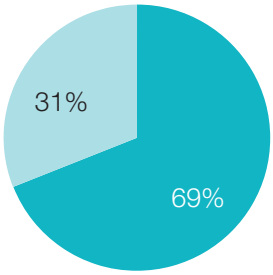
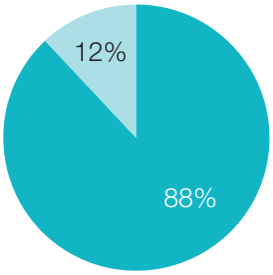


Productivity



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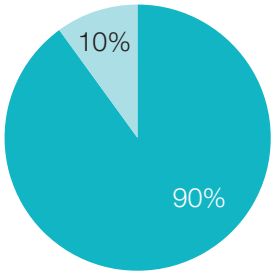


Jobs | Opportunity Abounds as Talent Search Continues

The tech industry has found the search for talent to be one of the biggest obstacles to growth. Leading internet companies have aggressively advocated for changes in Washington to allow more skilled workers to come to the United States through special visas; and for our government to make a serious investment in computer science education.

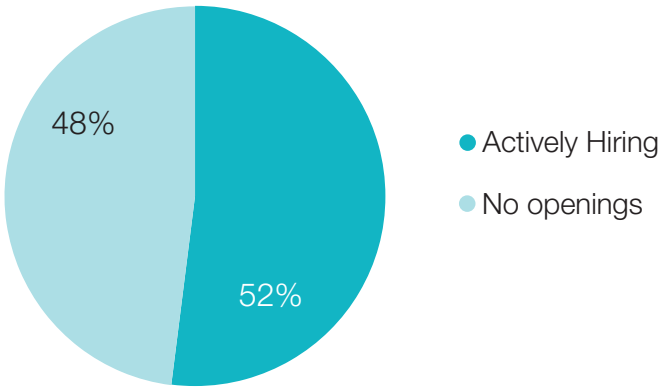
Unfortunately, skilled tech workers are hard to find because U.S. schools devote far fewer resources to computer science and STEM education than in the 1990s. This is surprising given that the median income for software developers is over $90,000. Even when our economy was in its deepest recession since the Great Depression, the unemployment rate for software positions was dramatically lower than other professions.

Our study found that the demand for skilled workers remains greater than the market can provide. The average number of unfilled positions among large companies was 208 while smaller companies averaged 10 openings. Startups and small companies find this shortage can impact them far worse than their bigger competitors. Often a single hire can make the difference in a small company's ability to innovate and grow.

Dropbox is a widely popular productivity app in both the App Store and Google Play. What began as a lean startup in 2007 has grown into a large company with offices around the globe. As it expands, Dropbox is seeking to hire at a prodigious rate. At the time of this publication, the company had more than 100 job openings worldwide, the majority of which were located in its three U.S. locations. Last year that number only totaled 50.

Top App Companies Search for Talent

Average Across All Categories



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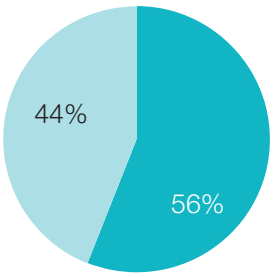

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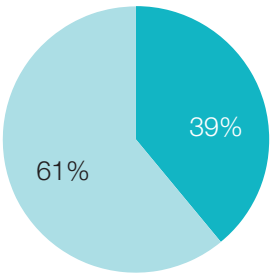

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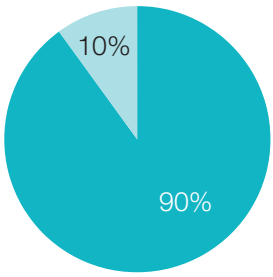

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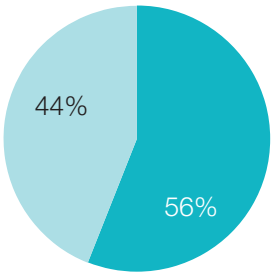

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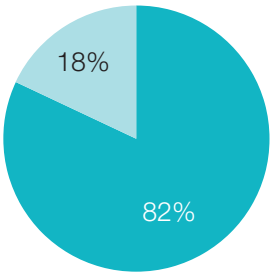

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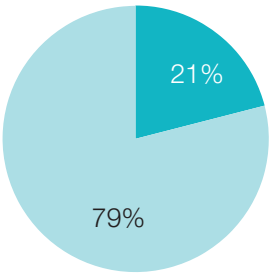


USA | App Companies Thrive in America

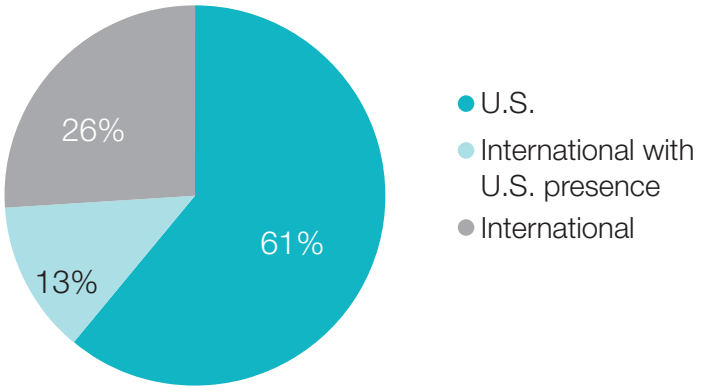
Six years ago the app economy was born in the U.S. with Apple's introduction of the App Store. Millions of apps and billions of dollars later, the U.S. remains the preferred location for companies in the mobile ecosystem featuring a business environment that fosters entrepreneurism.

U.S. companies still dominate the rankings across all categories in both app stores. Nearly three-quarters of all apps surveyed were made in America or by those with U.S. facilities. Categories with the highest percentage of American companies were education and medical.

As the nexus of mobile innovation, many international companies are eager to have a U.S. presence. This is most prevalent in the lucrative market for mobile games. Eighty-seven percent of game apps are made by companies in the United States. Thirty-one percent of those companies are headquartered abroad. London's King.com Ltd. – makers of Candy Crush Saga - and Finnish company Supercell that makes Clash of Clans both have large offices in America where they are aggressively hiring.

App companies prefer U.S.

Average Across All Categories



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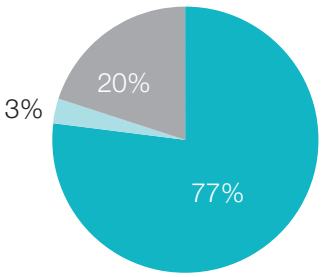

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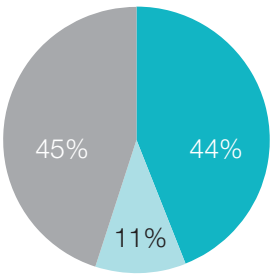

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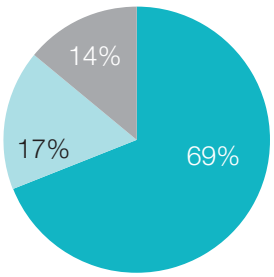

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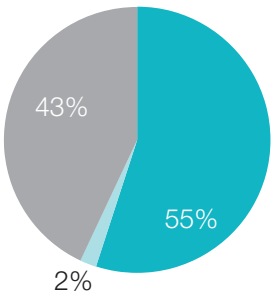

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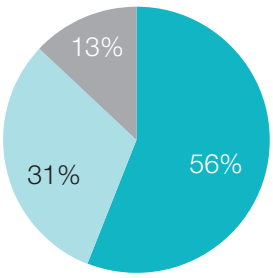

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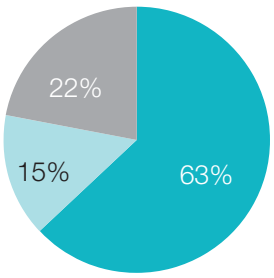


Location | App Economy Thriving in Every Region of the Country

Successful app companies are found in every region of the country. While a large number of app companies call the 1,500 square miles of Silicon Valley home, we see an incredible amount of geographic diversity among companies making top grossing apps in the U.S.

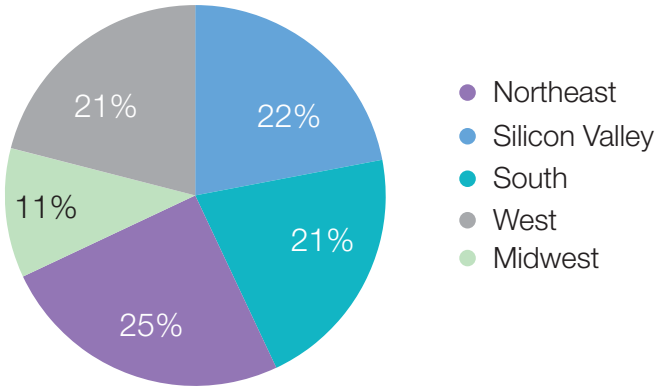
Seventy-eight percent of the leading app companies we surveyed are located outside Silicon Valley with a fairly even balance throughout the country. This has much to do with the nature of app development. Requiring only the ability to code and connectivity, apps can be made anywhere. Companies are emerging in areas wherever there are talented developers with good ideas.

One such company is Iowa-based Higher Learning Technologies. Based in the town of Coralville, the company makes a nursing exam prep app called NCLEX PN Mastery. The sample exam content comes from nurses and nursing professionals, and the contributors make themselves available to field questions from users.

Backflip Studios, a Boulder, Colorado-based company with fewer than 50 employees, makes top game apps like DragonVale. Their games have been downloaded over 300 million times, and have won awards as Apple's #1 top grossing iPad app and #4 top grossing iPhone app in 2012.

Location of U.S. companies making top apps

Average Across All Categories



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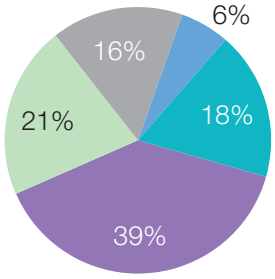

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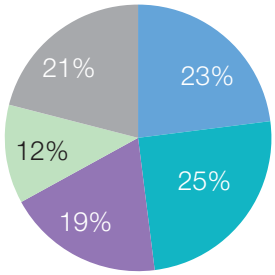

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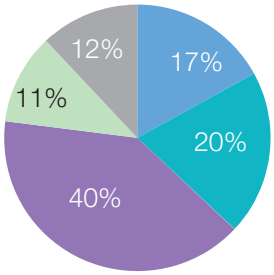

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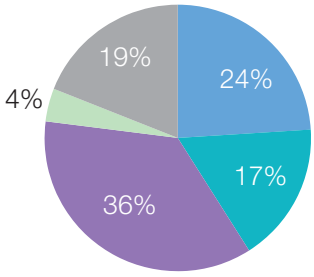
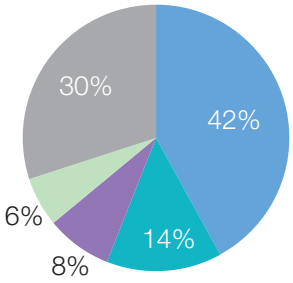


Games



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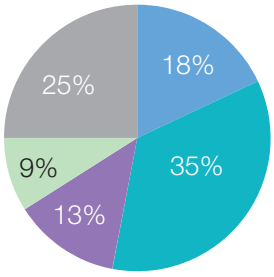


Health | Innovation Changing How Patients and Doctors Connect

The explosive growth of health and medical apps, and the importance that platforms are placing on this space, led us to include them in our study for the first time. Apps in the medical category tend to be for healthcare professionals while the health category features many that target consumers, but we see these being embraced as resources by both communities.

The number of health apps has doubled over the past two years and analysts expect revenues to reach $26 billion by 2017. This is because of incredible results we are seeing in mobile health innovation. Companies developing services through smartphones and tablets are helping users monitor their health and better connect with medical professionals to speed diagnoses and improve medical outcomes.

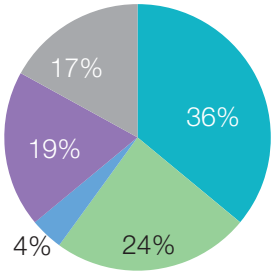
The top platforms both announced plans to launch mobile health services over the summer. Apple was first out of the gate with its HealthKit which features a secure hub to review health data from apps that don't sell this information or use it for advertising.

One such qualifying company is New York-based Noom that makes apps to help users lose weight and live healthier. With fewer than fifty employees, Noom Weight app for iOS and Noom Weight Loss Coach app for Android rank at the top of the charts. Google's health data collection efforts through GoogleFit provide a different option for developers and is expected to reach the market soon.

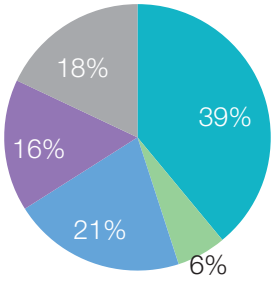
Location of U.S. Companies

- Northeast
- Silicon Valley
- South
- West
- Midwest

Health app makers



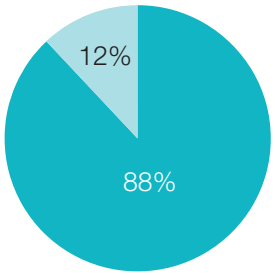
Medical app makers



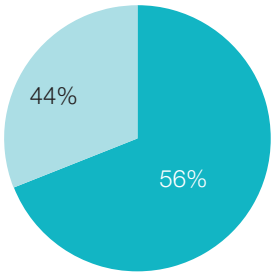
Company Size

- Small Business
- Large Business

Health app makers



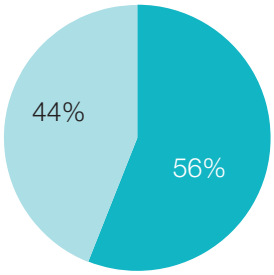
Medical app makers



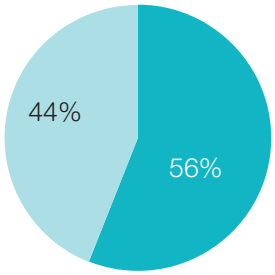
Hiring Status

- Actively Hiring
- No openings

Health app makers



Medical app makers



Kids | Interactive Mobile Devices Showing Classroom Results

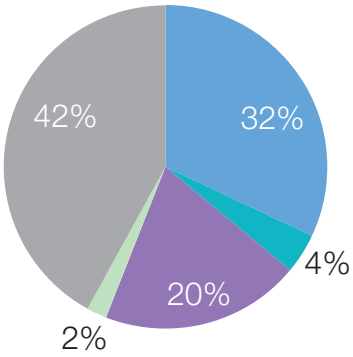
Over the past three years, we looked at the characteristics of the education category of apps. Parents and educators have discovered the effectiveness of interactive mobile devices as teaching tools, and schools are adopting these for use in the classroom with great results. Both Apple's App Store and the Google Play store have seen the rise in popularity of education apps aimed at children.

Arriving alongside the launch of iOS 7, Apple introduced a new app category in response to this heightened interest that addresses the unique needs of parents. This section of the store separates apps into three age ranges and features educational and entertaining apps for the younger crowd.

We will be closely watching this new category. In its early stages, we see small companies enjoying a lion's share of the success. Small businesses like Glendale, California-based Age of Learning, Inc., who makes top ranking apps like A to Z Videos. Their team makes comprehensive online and mobile education resources for children ages 2 to 6.

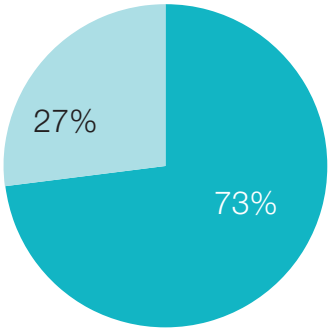
Location of U.S. Companies

- Northeast
- Silicon Valley
- South
- West
- Midwest



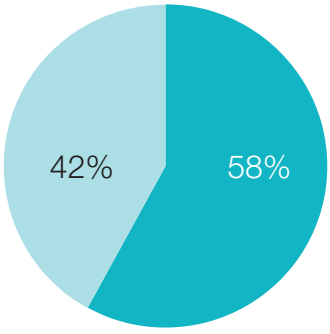
Company Size

- Small Business
- Large Business



Hiring Status

- Actively Hiring
- No openings



China | U.S. Companies Remain Strong in China Market

China has traditionally been a marketplace beyond the reach of independent software developers. That all changed with the rise of the app economy.

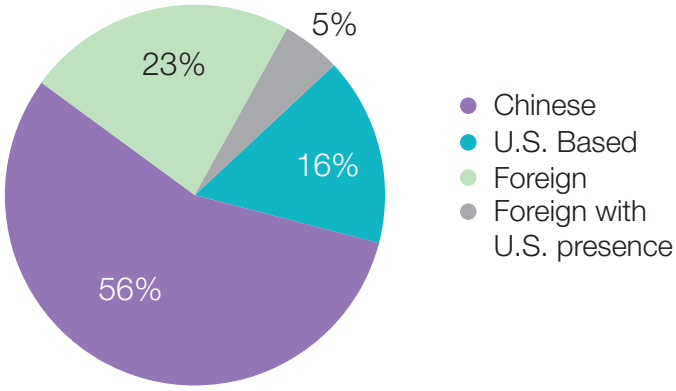
There are still considerable piracy challenges for software companies competing in China. But the emergence of the app industry brought curated stores to protect consumers and app makers from counterfeit products.

Where this has most benefited app makers is the Apple App Store, which began accepting Chinese currency for transactions a year ago. We have subsequently seen a sharp drop in the jailbreaking of iPhones in China and a commensurate rise in app revenues.

Twenty-one percent of the apps we surveyed were American or companies with a U.S. presence. Analytics firm App Annie recently reported that China was the key market for Apple App Store growth, with revenues growing around 70% quarter-over-quarter in Q1 of 2014. With the iPhone 6 scheduled for release later this month we'll be watching for further growth opportunities in China.

U.S. & International companies in China

Average Across All Categories



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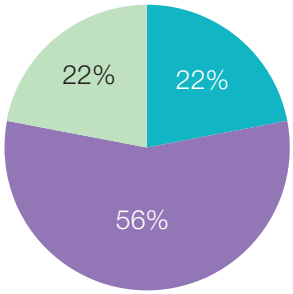
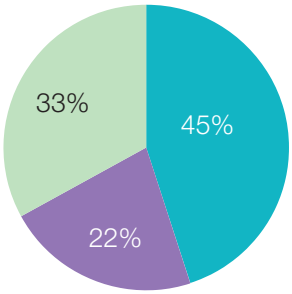
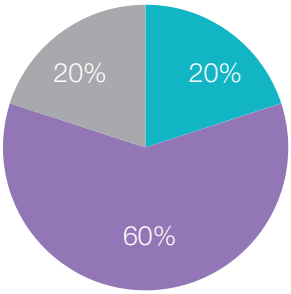


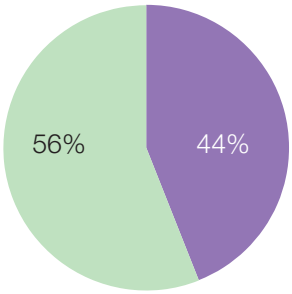
Productivity



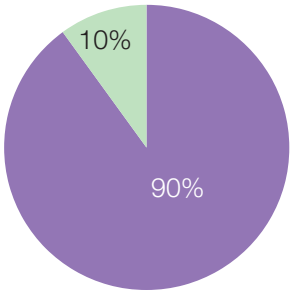
Education



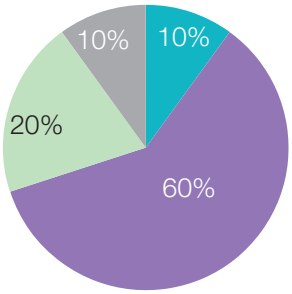
Health



Games



Business



Government | Microsoft's Innovative Gov App Resource

While the bulk of our study focused on the top apps in the two largest stores, we discovered some interesting features about the Windows Phone Store in the course of our research.

Windows Phones have a special Government app category that isn't a part of other platforms. The leading entries here are a wide range of globally focused apps that provide resources for governments or access to government resources.

In the top 25 we found apps from the Philippines, Israel, Egypt, India, Brazil, Sweden, and Finland as well as many from the U.S. These are handy resources that explain the Phillipine Constitution, World Bank development indicators, or an Indian law search tool.

One of the apps that caught our attention was Know Your MP! This app lets users browse the profiles of UK Members of Parliament providing access to their contact information, Twitter activity, and floor debates.

Methodology

On July 31, 2014, we surveyed 650 top grossing apps in the Apple App Store and the Google Play Store across the categories of Education, Health, Medical, Business, Productivity, and Games. We then analyzed each app by location, company size, and employment opportunities to measure the greatest influences impacting app economy growth. We combined the results from each store to provide a full picture of the app economy from the two stores where the vast majority of apps are downloaded.

To further expand our research, we took a closer look at the top 50 kids apps in the Apple App Store, as well as the top 50 governments apps in the Windows Phone Store. We also revisited our prior research on China's App Store, looking at the presence of international companies in the categories of Education, Health, Medical, Business, Productivity, and Games. This analysis was conducted using publicly available data from the Apple App Store, the Google Play Store, company statements, and industry publications.

About ACT | The App Association

ACT | The App Association

actonline.org | @actonline | facebook.com/actonline.org

ACT | The App Association is the leading organization for software companies in the mobile app ecosystem. Representing more than 5,000 app companies and technology firms, ACT | The App Association is widely recognized as the foremost authority on the intersection of government and the app economy.

ACT | The App Association leads industry self-regulatory initiatives to allow technology companies to continue innovating while limiting the cost of government intervention. Committed to identifying solutions through collaborative engagement, the group attracts support from a broad range of industry leaders, while its leadership and prototypes have earned widespread praise from both government officials and the advocacy community.

ACT | The App Association advocates for an environment that inspires and rewards innovation while providing resources to help its members leverage their intellectual assets to raise capital, create jobs, and continue innovating.

The Importance of Robust Networks

- **The future of mobile apps depends on next generation broadband networks in more places with better quality.**
- **We are creating applications which need faster and larger wireless and wired networks.**
- **Mobile apps have changed the lives of consumers, and we are moving forward on job-creating innovation in mobile enterprise adoption.**

Better Access to the Internet = More Customers for Small Businesses

The internet is a great equalizer; it allows small businesses and developers to have access to millions of potential customers at a low cost. But for many living in rural areas, internet access is limited and dial-up is the only game in town. This cuts off many from the benefits of the open "always on" internet and the many apps that rely on faster internet to provide benefits like video conferencing and real-time information.

The expansion of internet services, from both private and public initiatives, works to bring the economic and educational benefits of high-speed internet to rural areas. We urge the support of any measure that would bring the internet to more people and allow small businesses and developers to reach more customers. Where better connections exist, developers are able to offer better products and services to more people.

More Spectrum Please!

As developers, we are working hard to leverage that "always on" connectivity of the devices that run our apps. Spectrum, the airwaves on which data and voice travel to and from our smartphones, tablets, and other mobile devices, is becoming congested as consumers rapidly adopt more data-intensive apps and services. In order to continue the mobile communication revolution, we urge policymakers to:

- Allocate more spectrum, including incentive auctions, which transfer spectrum from broadcast TV for consumer wireless use.
- Maximize the amount of spectrum made available for consumer wireless use by allowing all qualified bidders to participate fully on equal terms so that spectrum goes to those providers that will use it most efficiently.
- Support continued work toward reallocating federal government spectrum for American consumer high-speed broadband services.

People in Rome waiting for new Pope in 2005 and 2013

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With Better Connections Comes Innovation

The sale of smartphones now exceeds the sale of feature phones, and tablets like the iPad have become ubiquitous. Numerous industries, from health to communication to entertainment, are gaining advantage from these new technologies.

Mobile devices, especially tablets, are the perfect devices to display health records, and even allow for faster, more accurate clinical decision-making. More and more schools are embracing mobile devices for education. And the creation of the apps they're using is a nationwide small business phenomenon. A failure of connectivity here won't just cost dollars; it could affect the health and well-being of patients, the education of students, and the growth of small businesses. With applications changing the face of many different industries, improvement in the way our apps connect will be critical for the growth of these industries going forward.

Cloud Computing

- **Cloud computing is responsible for tremendous innovation, not just in IT but in almost every other industry.**
- **Recent court cases put the fantastic innovation in and around cloud computing in jeopardy.**
- **We need legislation that ensures businesses, large and small, can comply with the laws in all countries in which they operate.**

Cloud Rocks!

Cloud and cloud computing has become what IT businesses always needed: a way to increase our ability and capacity without spending massive amounts of money on new hardware and software and training new employees. Cloud allows small businesses to punch above their weight class and compete with larger businesses.

And it's not just tech businesses. Industries such as banking, education, energy and utilities, healthcare, insurance, media, consumer service, and government are all increasingly incorporating cloud to reduce the cost of IT (by over 35%) and to better communicate, both within their company and with their customers.

IHS estimates that global business spending on the cloud (infrastructure and services) will reach $174.2 billion by the end of this year, up 20 percent from 2013. By 2017, that number is expected to reach $235.1 billion, triple what it was in 2011. And cloud itself brings jobs; the U.S. Department of Labor predicts the rise of cloud computing will create over 1.4 million specialized jobs by 2020.

Courts and Department of Justice Muddying the Waters

However, recent court decisions have put in doubt whether we can use the cloud in a way that complies with the national laws of every country in which we operate. A recent Federal Court decision out of New York set a dangerous precedent by requiring Microsoft to turn over emails stored outside the United States and defining those emails as the "business records" of Microsoft.

This decision is problematic for many reasons. It forces American businesses to choose whether to obey U.S. law or the law of the countries in which they store data, a tricky proposition especially for small businesses. It will also shake international faith in the U.S. high-tech market and its ability to secure data, which could result in a loss of $180 billion and two million American jobs. Finally, such a decision also opens the door for unscrupulous foreign entities to seize the private communications of Americans living abroad which are stored in the United States.

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Welcome Legislative Corrections

Senators Hatch, Coons, and Heller took a first step in reversing that precedent by introducing the Law Enforcement Access to Data Stored Abroad Act (LEADSA). The bill clarifies that Congress never meant to give law enforcement the power to issue warrants that reach outside the United States.

The bill allows the government to obtain only through a warrant the electronic communications relevant to criminal investigations of United States persons, regardless of where the communications are stored. However, that warrant cannot violate the laws of the country where the communications are stored.

More importantly, this bill emphasizes that "data localization requirements" (law enforcement telling cloud providers that U.S. data has to be stored in the U.S.) do not work in a borderless internet and will only serve to impede innovation.