WHAT'S THE HANG UP?

Understanding the Phone Network Transition and Defending Your Communication Rights
About this Toolkit

The purpose of this toolkit is to explain how the technology that delivers your telephone service is changing, who will be impacted, and how you can get involved in protecting a public utility that many of our lives depend on.

Table of Contents

Why This Matters: Background ................................................................. 2
History of the Telephone Infographic ...................................................... 3
Learning the Lingo .................................................................................. 5
Which Communities Are Potentially at Risk? ........................................ 6
Where Are We Headed? ........................................................................... 8
Tools for Raising Your Voice ................................................................. 9
Developing Your Message ...................................................................... 12
Activist Pocket Guide ............................................................................ 13
Targeting Your Policymaker ................................................................. 14
Moving Forward: Next Steps ................................................................. 16
Why this Matters
From growing the economy by helping small businesses stay connected to customers, to allowing families to stay in touch, the phone system has made universal communication possible. As Congress debates cutting unemployment benefits, reducing food assistance programs, and the healthcare exchanges, our phone system still remains a vital public utility that should serve us all. Right now, there are efforts to strip away the authority of local and state governments. This is why it’s important to become involved in ensuring our communications system remains a universal service.

Background
For over a century, the telephone has been a universal utility, like water and electricity, for people in the United States. It is responsible for helping run the U.S. economy, public safety systems, and ensuring your family and you stay connected. From the rotary phone to your home’s cordless phone, the technology that has delivered phone service to your home may have changed, but the service has remained the same.

The telephone network has been a reliable and affordable system because of a social contract between the government and the public. In an effort to maintain this social contract, many public interest advocates are promoting Five Fundamental principles in an effort to protect the system we know and depend on today. These principles include: Service to All Americans, Network Reliability, Competition, Consumer Protection and Public Safety.

These principles have ensured that your ability to make a telephone call in Appalachia is just as easy as it is in San Francisco. Phone calls are clear and work during storms and most natural disasters. Phone calls reach their destination even if callers have different providers. Protections exist for telephone users against unfair practices such as price gouging. And most importantly, in times of emergency, you can dial 911 for help.

Currently, the largest U.S. carriers have announced major investments in upgrading the technology that delivers our phone service. This new technology has the potential to provide better, faster and cheaper phone service. To ensure that our communities continue to benefit from this system, we must get involved. Without our participation in determining the rules for the new road, carriers could potentially benefit at the expense of our communities. To better understand where we are heading, it’s helpful to understand the policy decisions of the past that brought us here.
How Did We Get Here?

The chart below describes past policy decisions, and how they have created the phone system we know today.

The History of the Telephone as a Universal Service

- **Mid 19th Century: Service to all Americans is established.** The U.S. adopts the concept of “universal service,” where people are able to communicate across the country, from anywhere, to anywhere, for a reasonable rate. Originally a postal service concept, universal service is eventually applied to other means of communication.

- **1840s: First comprehensive legislation** recognizing the telegraph as a vital communication service that should be available to all Americans fairly.

- **The Kingsbury Commitment of 1913:** Mandatory interconnection is established. In return for the government’s agreement not to pursue its case against AT&T as a monopoly, AT&T agreed to allow non-competing independent telephone companies to interconnect with its long distance network.

- **The Communications Act of 1934** establishes the Federal Communications Commission. The FCC takes over from the Federal Radio Commission and the Interstate Commerce Commission, and becomes the agency in charge of ensuring that communication services are provided under just and reasonable terms.

- **1968: Carterfone Decisions.** FCC decides that it was unreasonable for AT&T to prohibit subscribers from using their own equipment with their telephone connections. By allowing customer owned equipment to use the phone system, the Carterfone decisions paved the way for fax machines, modems, and much more.

- **1970s & 1980s: The Computer Proceedings** ensured that communications monopolies didn’t also become computing monopolies. Allowed companies to offer data processing and computer services using the telephone network, and prevented the telephone company from interfering. Consumers benefitted from a more competitive market.

**TECHNOLOGY MILESTONES**

- **Early 20th century:** Bells Model 102. The most popular and longest lasting home telephone.

- **1930s:** Rotary dial becomes commonplace.

- **After WWII** telephones saw rapid expansion with more sophisticated handsets.

- **Early 1960s:** Development of Electronic transmission systems, basis for digital telephony

- **1963:** Invention of touch-tone dialing

- **1973:** First mobile handset developed.
1984: Breakup of the Bell System. The Department of Justice wins its long-running anti-trust lawsuit against AT&T. The “Bell System” is broken up, and a series of local telephone monopolies are created, which operate separately from AT&T, which becomes a “long distance” company.

The Telecommunications Act of 1996: First significant telecommunications act since 1934. Envisioned that communication companies could start offering the same services in each other’s markets. Shortly after, providers begin offering services based over internet-protocol technology.

Early 2000s to Today: Series of decisions that allows VOIP providers to access benefits of phone system (phone numbers, interconnection, etc.) without being subjected to traditional phone rules.

What’s Next? As technology continues to change, the FCC needs to protect Universal Service to all Americans, and a network that is affordable, reliable, protects consumers and ensures public safety.
Learning the Lingo

As people who care about the future of our telephone system, it’s helpful to understand the technical terms that have emerged in the public debate over this phone transition. We may not be experts familiar with the technical terms, but we are experts about how this everyday technology is critical to our lives. In order to strengthen our advocacy, we’re providing definitions of important terms that help us shape the telephone system we deserve.

Here’s a glossary of important terms that are referenced in the toolkit:

- **Public-Switched Telephone Network (PSTN)** - The PSTN or “Plain Old Telephone System” (POTS) refers to the telephone network used by the general public. This network functions over different technologies, including copper and fiber.

- **Time-Division Multiplexing (TDM)** - This is the older, analog version of the PSTN, which has been around since the 1870s. It is used to transmit two or more phone calls over the same telephone line. The final TDM portion of PSTN is transitioning to a newer technology defined below, Voice Over Internet Protocol (VoIP).

- **Internet Protocol (IP)** - The communications technique used by the internet. The protocol may be used in other networks that are not the internet, but that are still referred to as IP networks.

- **Voice Over Internet Protocol (VoIP)** - A newer way of delivering telephone service that uses IP technology. This service can run over the PSTN network, but does not always require an Internet connection to do so. Applications like Skype are VoIP services, but do require an Internet connection.

- **“Carrier of Last Resort” (CoLR)** - An obligation of telephone providers to serve everyone in the service territory at a minimum standard and to offer a basic, affordable voice option.
Which Communities Are Potentially at Risk?

Victims of Natural Disasters
People can usually rely on their landlines to reach help in the event of a hurricane, tornado or flood. Much of the PSTN network runs with a backup power generator, and can ensure a call can be made even when your home electricity system is out.

Replacement wireless systems that run over new technology have proven to be less reliable in power outages and can leave people with no phone service. For example, VoiceLink, Verizon’s wireless service, has a rechargeable battery that lasts for only 2.5 hours of talk time or 36 hours of standby time. VoiceLink users have reported very poor reception and dropped calls to 911.

*Telephone users who reside in vulnerable areas should talk to local policymakers about ensuring the phone network remains reliable and that rules are in place to guide recovery after natural disasters.*

Rural Communities
Right now, rules are in place that order larger phone carriers to interconnect with smaller ones that serve rural areas. Even if companies agree to interconnect without government action, what happens if those companies are in a dispute? We need to ensure a call from a Verizon customer will connect to a loved one who is a Time Warner customer. Our current phone network supports rural communities by helping them stay connected to the rest of the country. In some states, the rules that promote universal phone service are being rolled back, which is potentially harmful to rural residents.

*Telephone users who reside in rural areas should talk to local policymakers about ensuring the phone carriers will still interconnect with each other, and service to their communities is maintained.*

Native Nations & Tribal Lands
Historically, Indigenous communities have had less access to critical broadband infrastructure that provides high speed Internet. Lack of affordable access to communications services worsen conditions of poverty on tribal lands and reservations. Federal policies in this area have created fewer incentives for companies to service tribal lands, which are typically located in remote rural areas. As a direct result, close to a third live with no basic telephone service and 90% don’t have access to high speed Internet. An upgrade of the telephone network could further isolate these communities.

*Telephone users who reside on tribal and or rural lands should talk to local policymakers about ensuring universal service is maintained, regardless of location or economic situation.*
Low-income and Working Class Communities
Affordable options to communicate are especially important to lower income and working class families. For many, services like a subsidized telephone line, calling cards, and collect phone calls are the only option to stay connected. Calling cards and collect calls are important to immigrant families who depend on them to stay in touch with family and friends in other countries. These options are also crucial for people who communicate with people in jail, prison or detention facilities.

Telephone users who use calling cards, collect phone calls or rely on subsidized phone service should talk to local policymakers about ensuring they are not left behind. An upgraded phone system still supports these critical services.

Elderly and People with Disabilities
Oftentimes for the elderly, a telephone is also a lifeline. Many medical monitoring systems, like Life Alert, run through a telephone line. For people who are deaf or hard of hearing, teletypewriter (TTY) technologies and video relay services are necessary to communicate. We must ensure that reliable access to these technologies is protected over the system.

Elderly and deaf or hard of hearing individuals should talk to local policymakers about ensuring IP based services that these technologies remain affordable and accessible. An system upgrade should aim to improve service for everyone.

Public Safety and 911
In the current phone system, public safety and accessibility rules are in place that ensure people have reliable telephone access in times of emergency. 911 services use geolocation technologies that allow first responders to locate and help people in need. It is unclear how well these services are going to function over the new system, but it’s important that they continue protect the public.

Anyone who depends on 911 emergency services should urge local policymakers to ensure these services continue to function and are accessible to all people. A person in a rural area or a low income in neighborhood should be able to reach 911 in the same reliable way someone in a city can.

Small Business Owners
Many small businesses rely on telephones to conduct e-transactions, like processing a credit card, and sending or receiving a faxes. Although fax machines may seem like an outdated technology to some, they are a vital part of many small businesses and medical offices who use them to collect and deliver information. Additionally, many alarm systems work through a telephone landline and could be affected by the switch to an IP phone network.

Telephone users who are small business owners should urge local policymakers to support the five fundamentals in order to protect their ability to do business.
So Where Are We Headed?

As of today, **141 million people in the US rely on wireline phone services.** Wireless technologies rely upon a wireline backbone, so wireline phone networks are still very important. Recently, there has been a push in various states to strip the ability of lawmakers to enforce these principles. This is referred to as deregulation. Those pushing these bills say that principles that apply to an old network are not needed on new technologies. *This is not true and is dangerous.* Below is a graphic of the states that have passed legislation that gives phone companies a free pass on how to implement their new service.

**States that Have Recently Passed State Telephone Deregulation Legislation**

As of 2013, **27 states** have passed legislation deregulating some form of telecommunication service. The only source of protection for customers living in some of these states is federal authority. Some have eliminated regulation for VoIP and broadband services, while others have eliminated regulation over basic phone service, and carrier of last resort obligations.

Much of the work to push deregulation bills has been done by groups like the American Legislative Exchange Council (ALEC). ALEC pushes “model” deregulation bills around the country that benefit its large corporate funders.

Since deregulation legislation passed in California, consumers have seen a 115% rise in the cost of basic landline phone service, from $10.69 to $23 per month.

Bills disguise deregulation efforts with clever language about “modernizing telephone regulation for economic growth” or “supporting market freedom.”

For more information about laws in your state visit: [http://openstates.org/](http://openstates.org/)
Raise Your Voice and Protect Your Community

Your voice is a powerful tool that allows you to be heard. Explaining why our communications system is important to you can influence the people who can make a difference. This means sharing your story with government and the media. Below are some tools that you can use to engage government policymakers, communicate with the media, and educate your community:

Meeting with Your Policymakers

Policymakers like meeting with their constituents, and you’ll be surprised by how easy it is to set up a meeting. The key to a successful meeting is knowing what to expect. Here are a few suggestions and things to keep in mind:

• Have flexibility: when submitting a meeting request suggest a couple of dates and times that would work for you

• Don’t be surprised if you don’t end up meeting with an actual policymaker; it’s much more likely you’ll meet with staff from their office, who will relay information to their boss

• Try to recruit 5 to 6 other people from your community to your meeting so that the policymaker gets to hear from other constituents

• Plan to meet for 30 minutes

• Before the meeting, plan what you’re going to say. Narrow it down to the top 3 things you want your policymaker to know and act on

• Bring materials that are relevant to the issue that you can leave with the policymaker’s office. For example: Pocket Guide (See page 13)

• If you get asked a question and you don’t know the answer, tell them you don’t know, but that you’ll get back to them with an answer

• After the meeting, follow up with a thank you and any additional information that may have been discussed during the meeting
Tool: Sample Meeting Request

Fill in the missing information and then submit to your local office via fax, email or letter. If you are not a constituent, or resident of the district or state of the official you are requesting a meeting with, then specify why taking the meeting is important for them. Perhaps they are on a committee that has authority over this issue. Or maybe they are someone that you believe will be a good leader on this issue.

[Date]

[Legislator Name]
[Legislator’s Address]
Attn: [Name of scheduler, if given when you called]

Dear [Representative, Senator or Commissioner _________],

(Last name)

I’m writing to request a meeting to discuss the phone network transition. Protecting our communications network is important to my community. It’s important that my local phone system continues to be a reliable and affordable service that is available to everyone equally.

I am available to meet at during the following dates; (insert dates and times). I hope you or a staff person can meet during one of the above times. Please feel free to contact me, I look forward to hearing from your office soon.

Sincerely,

[Name]
[Phone Number]
[Email]

Submitting an Op-Ed

Getting your story in the media is another way to influence the outcome of an issue. It’s an important strategy because it helps to educate the rest of your community, and chances are your local policymakers are paying attention to the local paper. There are many ways to get your story in the media--in this section we’ll focus on “Op-eds”. Op-eds are short essays written by readers and columnists.

For activists, op-eds are a way to take a strong position on an issue and not worry about having their message distorted by a reporter. They’re usually between 500-800 words though some newspapers may have shorter guidelines. Below is a sample op-ed about the phone transition. You can submit one from your point of view so that your voice and experiences shine through.
The nation’s largest phone carriers are currently upgrading the technology that delivers our phone service. This network upgrade has the potential to provide faster connections, better call quality, and an infrastructure positioned to be the communications envy of the world. As we transition to this new technology, companies, policymakers and citizens must re-evaluate what made our phone system great, and ensure those same principles transition to the new system.

Phone companies leading the charge have an opportunity to maintain the same quality of service at comparable prices all while protecting consumer interests. The government must ensure that companies conduct this transition in a way that is fair to consumers and preserves public safety. Preserving these values while delivering quality service is something companies and policymakers are capable of doing, and would ensure a successful transition.

One of the great values of our phone system is its ability to serve all Americans. This principle dates back almost 100 years when the country’s growth depended on having a “phone in every farm.” From the postal service to our landline phone, the idea that people can remain connected no matter how far removed is the basic principle that made our communications system great.

These principles could be left behind as we transition to a system that works over Internet era technology. State by state, companies and private interests are successfully lobbying policymakers to relax the regulations that have enforced these principles. Over 25 states have passed legislation that doesn’t allow the rules of the old system to be applied to the new one.

This is a dangerous direction for the public as carriers admit they still need to conduct trials in order to work out the unanticipated kinks of operating on the new system. How can we ensure these trials will be conducted in a safe and fair manner? How will policymakers ensure 911 capabilities are protected over a new system without rules? Will technology like Life Alert, fax machines, and security systems still be able to work?

We need service providers to continually and efficiently connect to their rivals. If I’m an AT&T customer I should be able to call my friends and family that have Verizon without a problem. The rules of the old phone system gave us this ability, and many take it for granted. However, stripping away the rules that keep consumers connected is the same as attacking our basic right to communicate.

Upgrading to a new technology should not give phone companies a free ride to abandon these values. The public should have a voice in this process and should make sure the phone system for future generations remains great. Even though the technology is changing, the values that have kept our communications system strong must remain the same and be protected.
Develop Your Message

Speaking from your own experiences and with your own voice is a powerful tool!
Organizing your experiences into messages is an effective way to connect with people and help them understand you. The way you discuss an issue with a member of your community may be different than discussing it with an elected official. It’s helpful to be flexible with adapting your message depending on your audience.

Below is a communication tool to help you craft your message around this issue and be a voice for your community. On the next page, we have included a pocket guide for activists to help with in-person meetings with policy staff or in community meetings. The pocket guide is designed to be folded into fourths and used as a messaging guide. It also includes talking points and spokesperson tips.

Tool: Message Polishing Worksheet
Adapted from the Center for Media Justice’s Communicate Justice 101 Toolkit
For more tips and tools visit www.mediajustice.org/toolbox:

1. What is the problem?
How can you state the problem with a metaphor, simile or image that speak to your target audience?
How can you confront stereotypes without restating stereotyping language?

2. What is the solution?
How can you convey your solution and vision with a metaphor, simile or image that speaks to your audience?

3. Who needs to do what?
What actions do you want your target audience to take to support your solution?

4. Why is this important to my community?
What shared fundamental value will communicate to your target audience that this is a high-stakes problem in urgent need of a solution?

5. Why is this important to me?
What shared fundamental value can you appeal to that conveys why this issue is important?
### Framework for Being an Effective Spokesperson

**Qualities of a good spokesperson:**

- **Feel Confident** - Stand tall, be open, speak firmly!

- **Believe in Yourself** - You are an expert and deserve to be heard!

- **Keep it Brief** - Less is more, be clear. Speak slowly and articulate each word.

- **Stay Real** - Speak on your personal connection to the issue.

- **Have Discipline** - Practice, practice, practice! Stay focused on the message and the goal.

- **Speak Truth** - Stick to what you know, don’t stay anything you don’t know to be true.

- **Be Strong** - Inject your message at every opportunity.

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### Five Fundamentals for the Phone Network Transition

**Service to All Americans**

- We must continue to ensure that all Americans, regardless of race, sex, income level, disability or location can communicate on the phone network.

**Competition and Interconnection**

- We must ensure that customers of any carrier, large or small, are able to communicate with each other.

**Consumer Protection**

- Consumers should continue to enjoy privacy in their phone calls and know that their phone bills will comply with truth-in-billing rules.

**Network Reliability**

- The phone network must work every time in the same predictable and reliable way, with the same or better quality of service as the old network. When natural disasters strike, communications networks need to be able to withstand them, and damaged networks should be brought back online as soon as possible.

**Public Safety**

- We must make sure the new technology ensures everyone is able to make that life-saving 911 call.

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### Tool: ELEMENTS OF A SUCCESSFUL MESSAGE

#### Frame for Institutional Responsibility

Highlight what institution (i.e. government, corporations) or what official is responsible for making change.

#### Speak in Shared Values

Values are more powerful than facts—figure out what you and your audience both care about and communicate based on these shared values.

#### Evoke Pictures

Use words that paint pictures your audience can relate to.

#### Be Creative

Use rhymes, sharp phrases, metaphors and comparisons to make your point. For example, comparing an expensive, ineffective public transportation system to a broken down bus shows audiences that the system doesn’t work.

#### Focus on Solutions

Advocates spend too much time talking about problems. Instead make sure your message clearly communicates solutions your audience can take part in.

#### Keep It Simple

Use clear reasonable language, especially when communicating for radical policy change.

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### Tool: Message Pocket Guide

**Why Does the Phone Network Transition Need a Framework?**

- Our current phone system is successful because we have rules that reflect our needs and values in communicating with each other. This system is transitioning from traditional technology to Internet Protocol (IP) technology.

- This transition presents opportunities for better services, but it must be handled responsibly so our ability to communicate is protected.

- This change means we need to evaluate what we value in the current network and ensure those things are protected as we transition.

- As we transition, a framework built around these same fundamental values will help us ensure we protect what is necessary for our phone network.
Targeting Your Policymakers

There are several key agencies at the federal, state and local level that play a role in the implementation and governance of an IP phone transition. These agencies are on the front lines of making policy and are good targets for organizations who want to ensure that their communities are not left behind in this transition. Public officials need to hear from real people who vote about why this issue matters to them. Consider sending a letter, setting up a meeting or making a phone call to any of these agencies to ensure they’re looking out for your interests:

- **Federal Communications Commission (FCC)** is the federal agency that oversees all interstate communications. This includes telephones, Internet, radio and television. It will be the FCC’s responsibility to figure out how telephone companies will be allowed to upgrade their networks. They will also play a major role in defining how trials that test new technologies are designed. They have the authority to shape how the trials are conducted, where they’ll be located, and what critical data phone companies will have to share with the FCC.

  - *How to engage:* You can call, write or submit comments to the FCC about why you think these trials should be conducted in a fair and balanced manner. It’s important for this agency to hear from diverse voices, and not just industry representatives.

- **Public Utilities Commissions (PUC)** are the FCC’s equivalent at the state level. In some states they are referred to as Public Service Commissions or Public Regulatory Commissions. They are generally a governing body that oversees the regulation of public utilities at the state level. When it comes to telephones, states have traditionally had the authority to designate eligible telecommunications carriers and oversee intrastate services (local and in-state calls). State commissions and local governing bodies have a role to play here. The FCC must ensure that state commissions remain empowered through the phone transition to maintain their regional and local decision-making authority.

  - *How to engage:* You can call, write or submit comments to your state PUC about why they should ensure consumers are protected, regardless of the type of the technology that is used to deliver their phone service.

- **U.S. Congress** oversees the activities of the Federal Communications Commission. Representatives are divided into several committees that oversee specific issues. These committees pick and choose which laws get voted on. In particular the House Energy and Commerce Committee and the Senate Committee on Commerce, Science and Technology have supervisory roles over the FCC and this issue.
• Although the FCC is an independent agency, members of Congress can shape opinions about issues the FCC is working on. They also wrote and passed the Telecommunications Act of 1934 and 1996 which lay out the FCC’s authority over communications policy in the U.S., and have the authority to rewrite it as necessary. They have the ability to decide the FCC’s future authority over a phone network based on new technology.

• **How to engage:** You can call, write or request a meeting with your Representative or Senator to talk about why he or she should protect the fundamental principles that ensure your community keeps reliable phone service. You can also request a meeting with a member of the relevant committee since they have the ability to decide which issues are voted on by the rest of Congress.

• **State Legislatures** are the equivalent to Congress but at the state level. They are also divided into committees. Their authority over the Public Utilities Commission and telephone regulation varies from state to state. Being elected officials, they have influence over matters that impact their constituents and a responsibility to listen to your voice. State representatives are also more accessible, making it easier for your message and your story to be heard. State legislatures will be key to ensuring that consumers are maintaining adequate telephone service. State Legislatures are the place where a majority of local deregulation bills are being passed (See state deregulation map, page 4.) You can also contact your local governor’s office to speak with leadership, which is another powerful office.

• **How to engage:** You can call, write or request a meeting with your State Representative or Senator to talk about why they should protect the fundamental values that ensure your community keeps reliable phone service.
Moving Forward

Please help us distribute this toolkit widely! If you know of a community organization, friends, neighbors or family members who are interested in becoming involved, please share this with them.

For more resources and copies of this toolkit, please visit: publicknowledge.org/WhatsTheHangUp

For more messaging resources please visit: www.mediajustice.org/toolbox

About Public Knowledge:
Public Knowledge preserves the openness of the Internet and the public’s access to knowledge; promotes creativity through balanced copyright; and upholds and protects the rights of consumers to use innovative technology lawfully.

About the Center For Media Justice:
Founded in 2002, the Center for Media Justice is a national movement building intermediary to strengthen the communications effectiveness of grassroots racial justice sectors, and sustain a powerful local-to-local movement for media rights and access.

Our mission is to create media and cultural conditions that strengthen movements for racial justice, economic equity, and human rights.

We work at the intersection of media and social change to remove institutional barriers to media equity and ensure that movements for justice have a public voice—so communities of color and America’s poor have a fighting chance.