

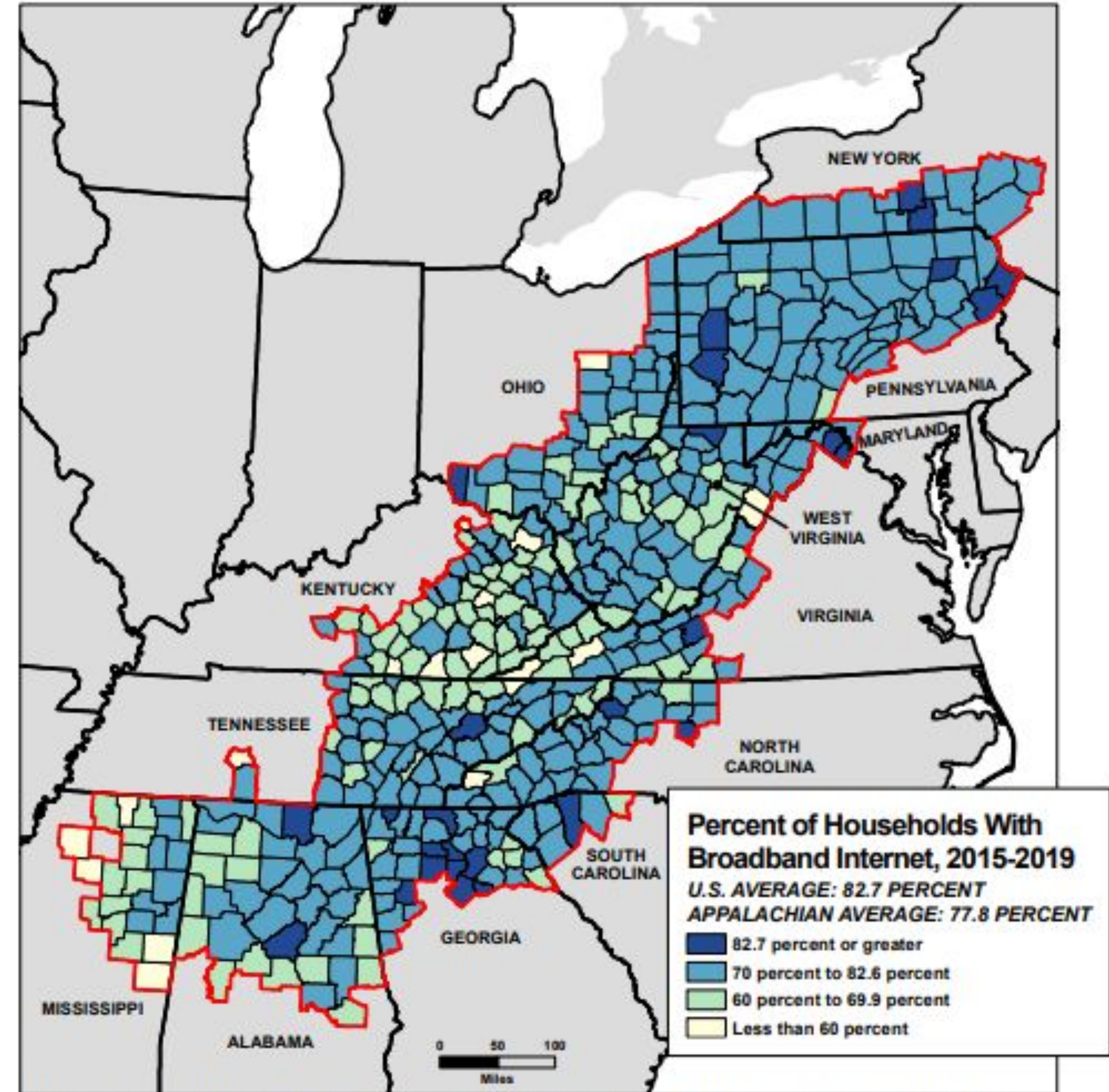
# Digital Storytelling for Developing Computer Skills in Rural Appalachia

Rebecca M. Jonas, Pennsylvania State University College of Information Sciences and Technology

Benjamin V. Hanrahan, Microsoft Developer Division

# Rural HCI in Appalachia

- Appalachia has current and historical disadvantages
- Rural Appalachia is a highly disconnected region of the US



Map Title: Percent of Households in the Appalachian Region With a Broadband Internet Subscription, 2015-2019  
Data Source: U.S. Census Bureau, 2015-2019 American Community Survey.

Image source: Appalachian Regional Commission

# The project: Digital literacy education for rural Appalachia

- Goal: Effective, engaging digital literacy education for in demand job skills
- Using digital storytelling for digital literacy
- Study site: Public library in a rural WV town (population < 900)



# The system we deployed

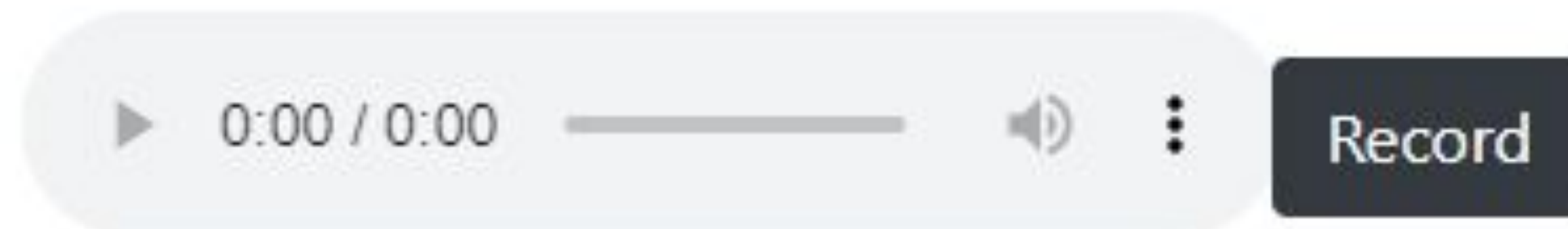
## Tell us about your town!

We are gathering stories about your town, participating in this is optional, you will be compensated if you provide an email.

---

## Record a story here

Press 'Record' when you are ready to record, and hit 'Stop' when you are finished. You can listen to your story once you have recorded it.



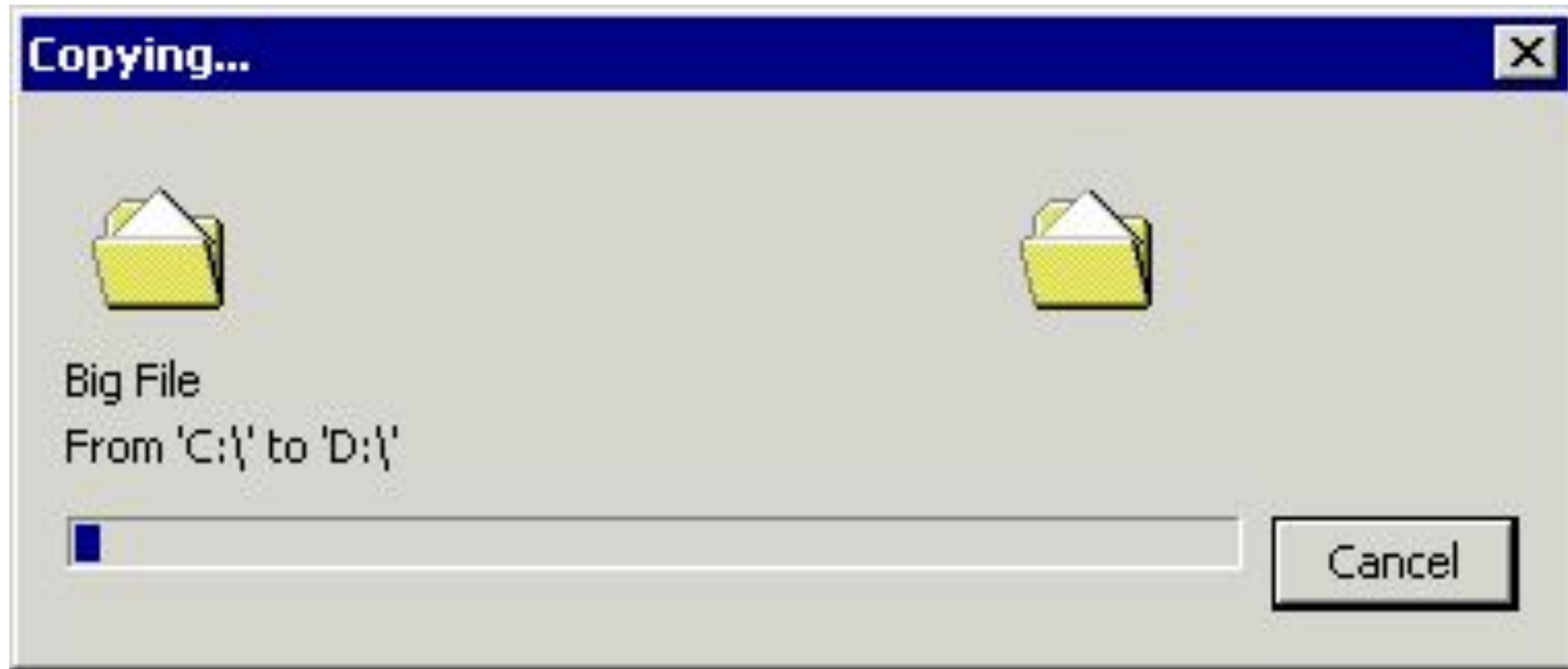
# The good: It worked!

- Our participants were passionate about storytelling
- Confidence in storytelling seemed to offset discomfort with technology
- Desires to use technology for storytelling helped motivate them to learn
- Participants learned and demonstrated new skills

# Some background: The deficit model in rural HCI

- Framing rural HCI work by focusing on what rural areas lack by comparison
- Agree with criticism of this model - our participants were creative, ambitious, excited, engaged
- Why though, do they feel they are “not suited” for tech use?
- The elephant in the room: poor infrastructure

No wonder our participants feel how they do about computers



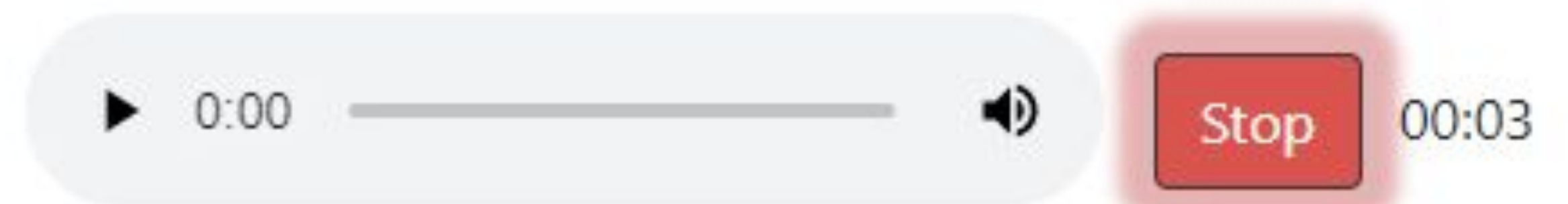
**Loading**

# *A different* experience of use

- It is not just the same but slowed down
- It directly conflicts with ability to learn
- Imagine doing the right thing, and being punished for it

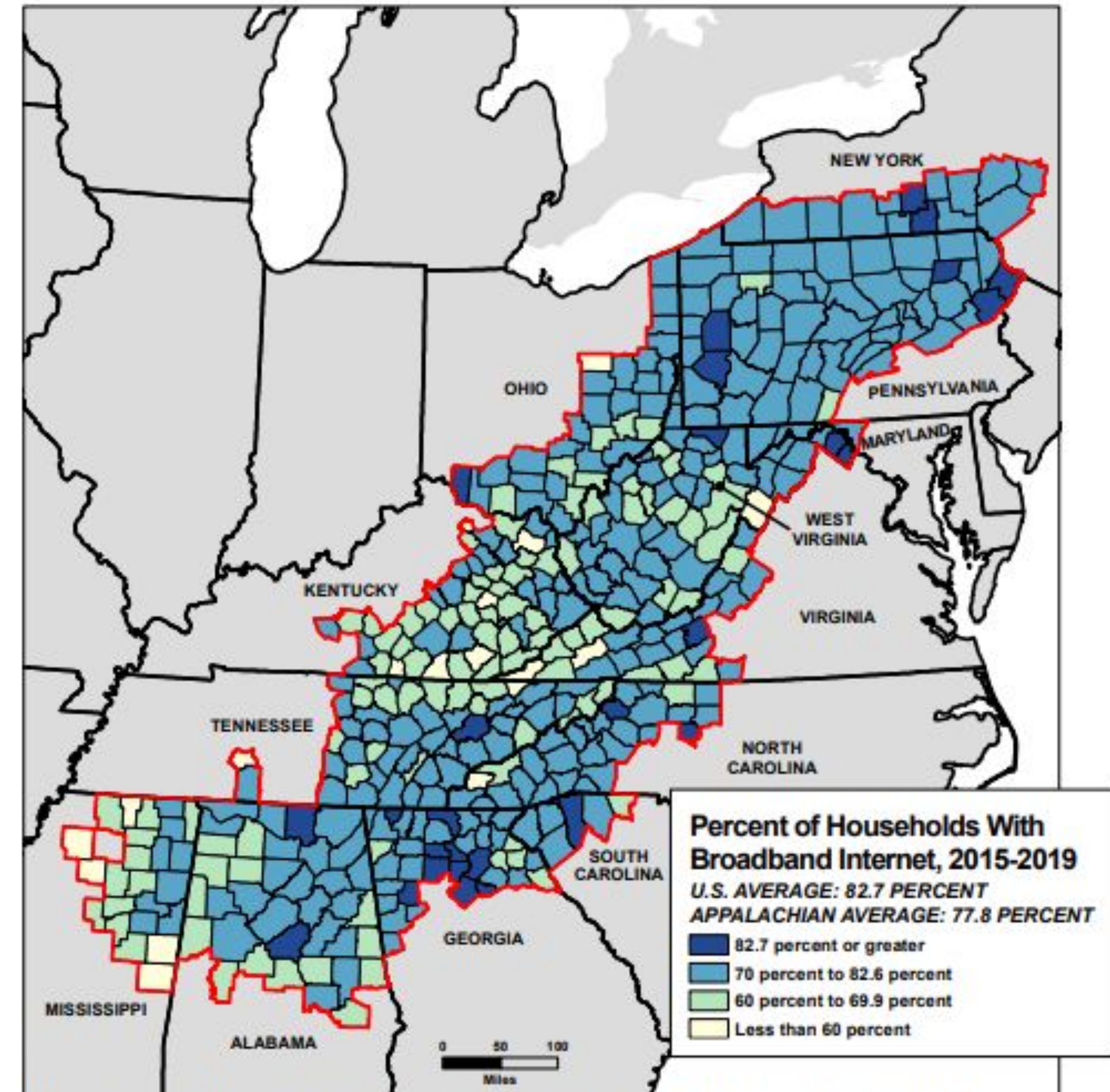
## Record a story here

Press 'Record' when you are ready to record, and hit 'Stop' when you are finished. You can listen to your story once you have recorded it.



# What does this mean for rural residents?

- Technology enthusiasts cast negative perceptions onto rural residents based on incorrect assumptions
- Rural residents are being told that this is their fault



Map Title: Percent of Households in the Appalachian Region With a Broadband Internet Subscription, 2015-2019  
Data Source: U.S. Census Bureau, 2015-2019 American Community Survey.

Image source: Appalachian Regional Commission

# So what do we do about it?

- Experience and understand the conditions that your participants deal with
- Test beyond state-of-the-art
- Ask: Who are we designing for?