Measuring Broadband America:

Fixed and Mobile Broadband Performance Measurement
Open Platforms & Opportunities for Collaboration

Panel Discussion: Network Performance and Measurement
Instrumenting Community Anchor Institution Edge Sites

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- **Measuring Broadband America**
  - Recognition of importance of broadband and need to improve availability of broadband network performance information.
  - Core principles
    - Provide **open and transparent** processes and information on broadband performance
    - **Full release** of collected data consistent with our **privacy policy**
    - **Collaboration** with industry, academia, and other stakeholders
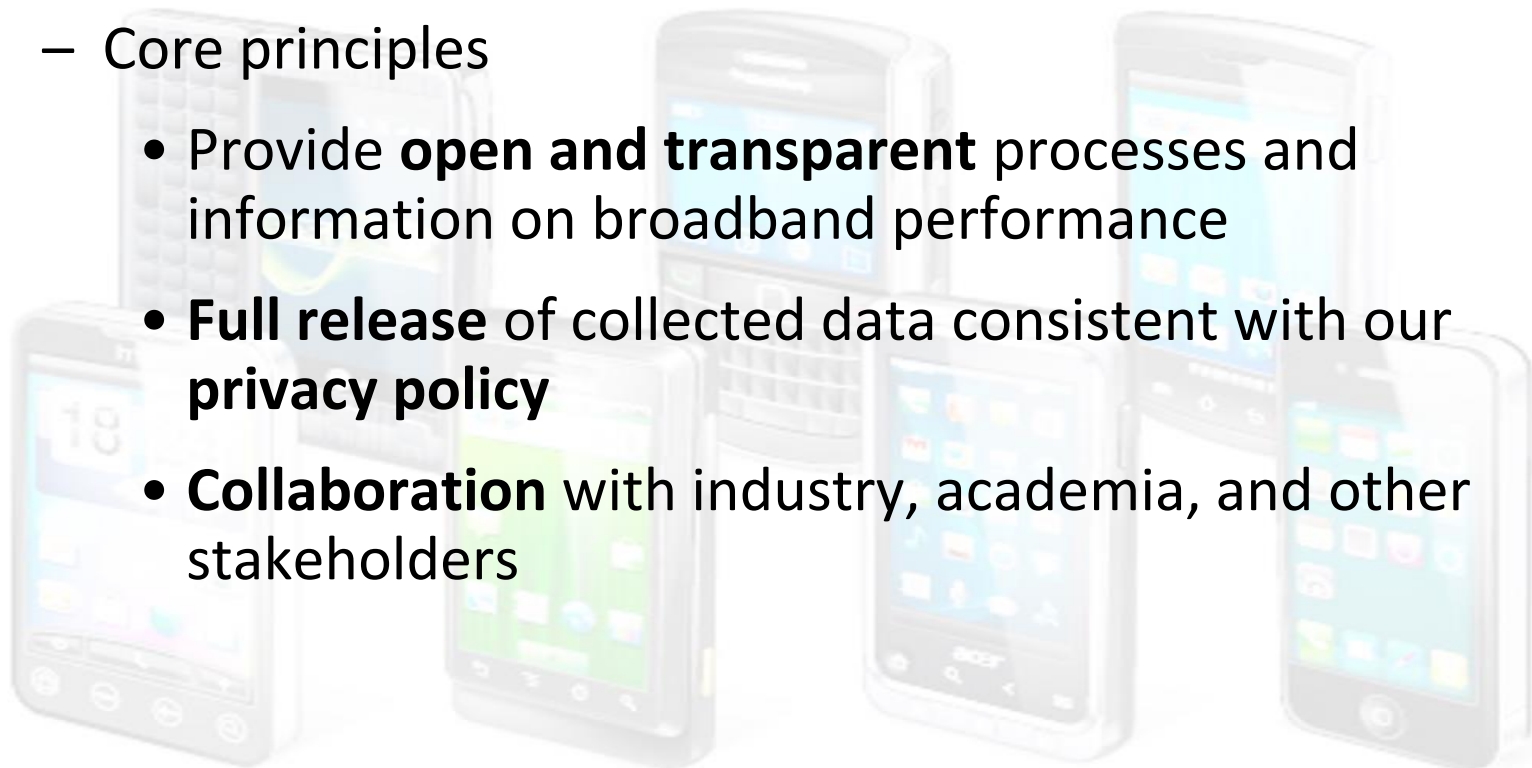
- **Program Goals**

  – Create nationwide data on broadband performance and characteristics accessible without restriction by the public

  – Protect privacy and maintain consumer confidence

  – Advocate for standardized metrics and data formats

  – Promote sharing of technologies and information with similar programs

  – Open Methodologies, Open Data, Open Source and Collaboration

FCC data sets and reports of (Internet) interest

- Measuring Broadband America (Internet performance measurements)
- Broadband Progress Report ("706 report")
- Broadband deployment data ("Form 477")
- International Broadband Data Report
- Mobile Wireless Competition Report
- Universal Service Monitoring Report (telephone service)
- Telephone Subscribership in the United States
- Report on Cable Industry Prices
- Trends in Telephony Service
- Not available:
- detailed price & subscription data
- outage and reliability information

- **Fixed Broadband Tests**

  – Commission began gathering data in 2011 and has released three reports on *fixed* broadband performance.

  – Strategic goals to ensure accountability, increase transparency, and enhance competition in the market.

  – Reports have spurred investment, helped consumers make informed decisions about the marketplace, and helped the Commission make fact-based decisions.

  – Developed infrastructure for nationwide testing and data collection

- **Expansion to Mobile**
  - Recognition of importance of mobile broadband and need to expand the program to mobile broadband networks achieved with releasing of FCC Speed Test App for Android.

  - Shares core principles and open methodologies of fixed effort
    - Provides information to consumers and interested stakeholders using Open and Transparent methodologies about mobile broadband.

      –Release of collected data consistent with privacy policies

    - Encourage improvements in mobile broadband networks and drive competition and fact-based decision making.

    - Utilize collaborative Open approach with support from academics, industry, government, public interest and other stakeholders
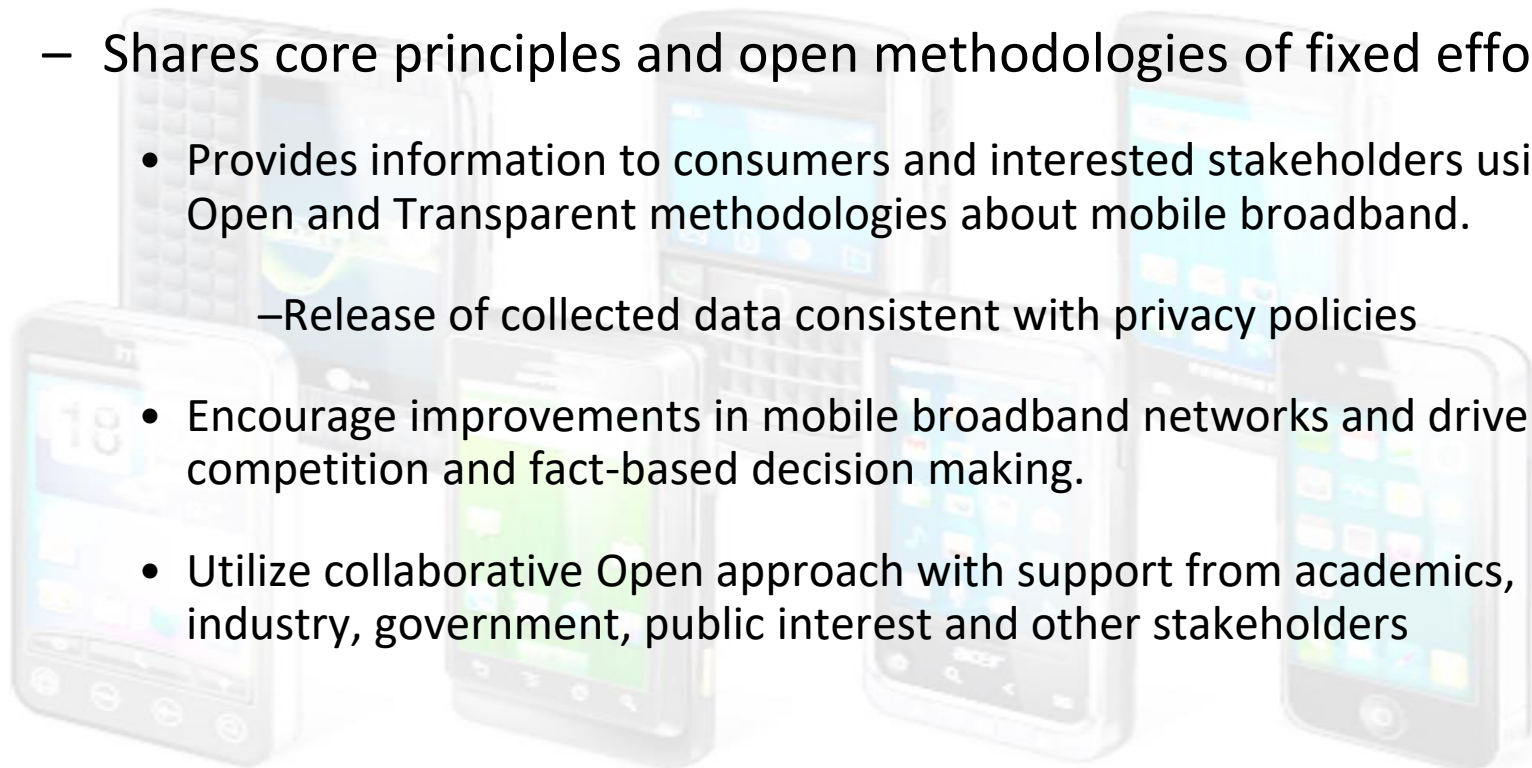
- **Consumer privacy top priority.**

  - Developed policies and procedures working with a diverse team of privacy experts from the federal government, academia, and industry.

  - Fully anonymous data collection with no personal or identifiable information collected.

  - Client software released as open source for inspection

  - Analysis of data's statistical properties by privacy experts to ensure anonymity and prevent re-identification prior to release of data.

  - Mobile App Terms and Conditions and Privacy Policy developed over multi-month "privacy by design" and reviewed by all stakeholders

- **Consumer privacy Issues**
  - Direct personally identifiable information
  - Unique handset identifiers or data features
  - Analysis and data processing policies to allay risks of reidentification

• **Shareable Collaborative Datasets**

– Openly documented data dictionary

– Structured export capability

– Anonymized data

– Public and unrestricted use of data consistent with privacy policy

Opportunities for Collaboration

- Use of shared datasets

- FCC App source code available

- Ability to support other data collections

- Leverage collaborative and privacy-centric best practices
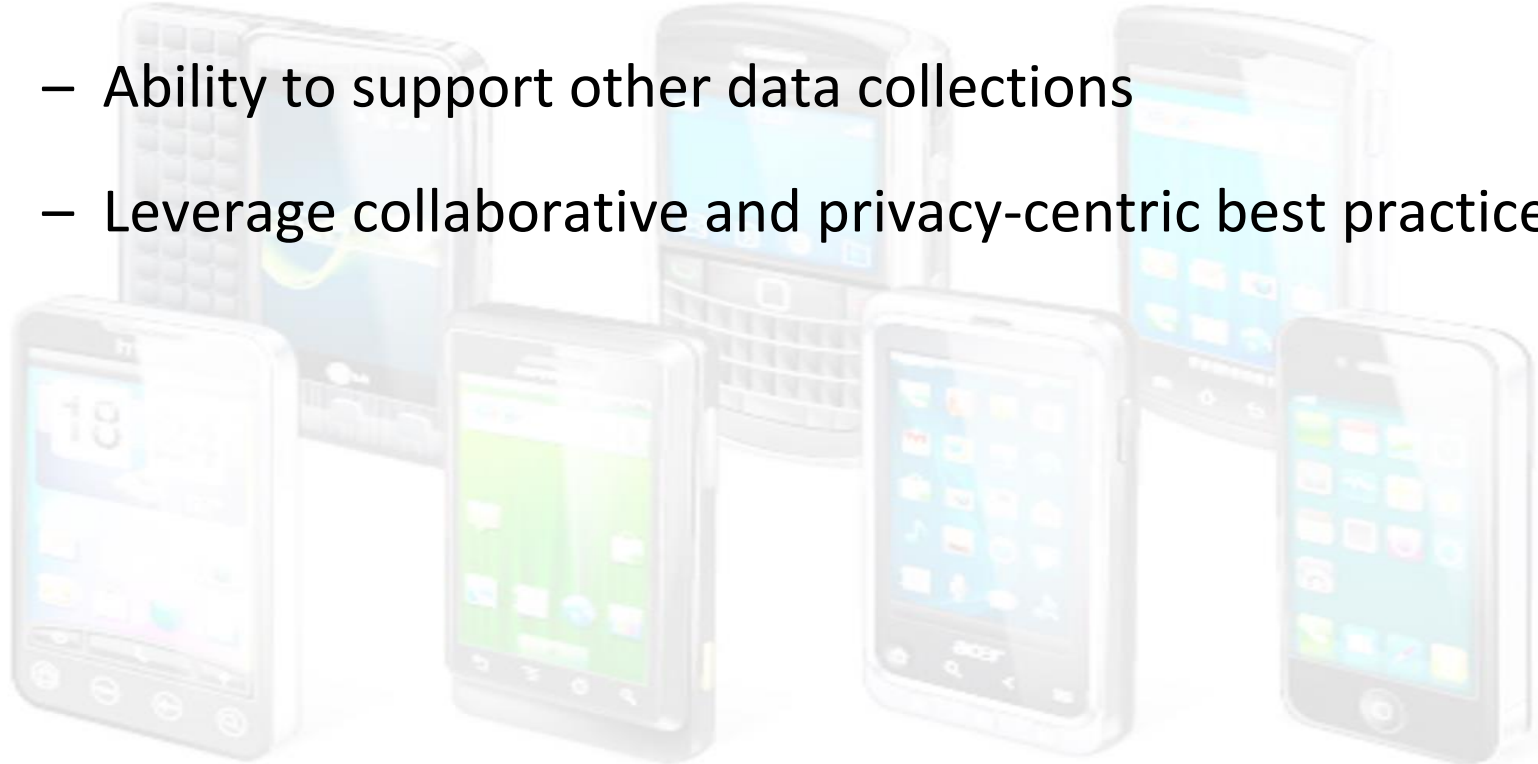
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• **Crowdsourcing Open Data**

- – Engage the stakeholders

- – Value of Open technologies and approaches for internal stakeholders, contractors, industry stakeholder and the public

- – Understanding the business rules and computing tasks important to crafting privacy policy

- – APIs = SQL Queries and should answer questions but relieve burdens

- – Crowdsourcing is not a magic bullet and takes work engaging with the public

- – Avoid the "Law of the Horse" - Understand the legal problems and traditional approaches

- – Substance over form and the importance of technology as an enabler of the substantive mission