Panel on Model TV White Space Regulations
Step 1: Assessing the opportunity
Step 2: Understanding the regulatory landscape and key stakeholders
Step 3: Understand potential use cases
Step 4: Understand key elements of rules
Step 5: Crafting rules

DSA members are ready to work with policymakers and regulators on developing and implementing enabling regulation
Step 1: Assess the opportunity

- Secondary access to the broadcast bands has the potential to deliver broadband over long distances and comparatively low costs.
- What are the right conditions for pursuing the TV white spaces opportunities?
  - Could citizens benefit from broadband with increased reach and speed and improved affordability?
  - Is there sufficient spectrum?
  - Is the regulator willing to innovate?
- Regulatory change may not be required in all cases, but in many countries, enabling secondary uses of the broadcast bands requires a rule change.
Step 2: Understand the regulatory landscape and key stakeholders

- Before undertaking a rulemaking project, proponents of secondary access to TV white spaces should understand both how a rulemaking is accomplished and who will need to be involved in the process.
- Key questions about the rulemaking process:
  - Is legislation required?
  - Which government authorities would be responsible for any rule change?
  - What sort of public consultation is required, if any?
  - What approaches have other countries taken and can those experiences be leveraged?
- Key stakeholders:
  - Spectrum regulator(s)
  - Incumbent Broadcasters
  - Other incumbent entities entitled to protection from harmful interference
  - Civil society
  - Broadband users, including government and educational users
  - Database providers and device manufacturers
Step 3: Understand potential use cases

- **Fixed broadband access**
  - Enables last-mile connectivity
  - Allows delivery of broadband to fixed locations such as schools, homes, or community centers
  - Typically higher-power (e.g., 4 or more watts)

- **Personal portable devices**
  - Increase the range of Wi-Fi
  - Lower power than fixed transmissions (typically 100mW)

- **Internet-of-Things**
  - Machine-to-machine communications
  - Often used in industrial settings
  - Low-to-medium power (typically 250 mW or less); limited data transmissions

- **Different use cases may call for different rules regarding power levels or other technical parameters**
Step 4: Understand key principles for rulemaking

- Rules must ensure that broadcasters and other protected entities do not experience harmful interference.
- Rules should permit use of enough spectrum to enable meaningful uses. Overly conservative rules will fail to take full advantage of the spectrum sharing opportunity.
- Rules should be flexible enough to take advantage of improvements in technology and as such should be technology agnostic.
- Rules should be crafted in a way that allows global harmonization and scale.
Step 5: Crafting rules

- **Overall goal of rules**: Enable meaningful and useful secondary operation while protecting incumbent users
- **Key elements of most TV white spaces rules in development**
  - Licensing model (To date, all jurisdictions have allowed television band devices to operate on a license-exempt basis.)
  - Entities entitled to protection
  - Methods of protection (e.g., databases or sensing)
    - Rules for database provision and operation or sensing thresholds
  - Device classes (e.g., fixed or mobile, master and client)
  - Power limits
  - Out-of-band emissions requirements
  - Type approval
  - Propagation model