

Dynamic Spectrum Sharing Works... AMBIT Doesn't

- **CBRS is Legitimate Sharing:**
CBRS employs dynamic spectrum sharing that is *working now*, letting new users safely share with incumbents.
- **AMBIT is Spectrum Clearing:**
The AMBIT approach is fake “sharing” – widespread clearing coupled with unworkably slow, manual coordination in limited areas.

Wireless data demand is growing, but the radio spectrum required to power all kinds of wireless connectivity is a limited natural resource. In fact, there are no unused spectrum bands that could realistically be put to new commercial use. That means increasing demand for spectrum must be met by either: (1) evicting current users; or (2) allowing new and current users to share frequencies.

Spectrum scarcity is why an America-first spectrum policy must embrace legitimate dynamic spectrum sharing that automatically and dynamically coordinates military and commercial operations, protecting existing users and making more spectrum capacity available to meet new and increasing demand.

AMBIT: Spectrum Clearing

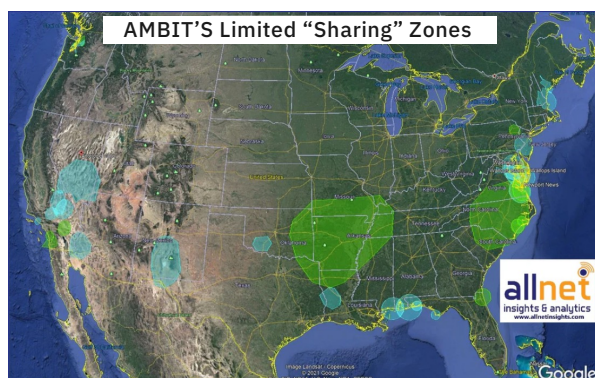
Widespread Clearing + Unworkably Slow,
Manual Coordination in Limited Areas
3.45-3.55 GHz

AMBIT = 87% Cleared & Relocated

- With AMBIT, an area covering about **87% of the continental US was cleared entirely** – meaning all existing users were relocated – to allow for **full-power exclusive licenses**.

AMBIT = 13% Manual Coordination (AMBIT Applies in Continental US Areas Only)

- Only in the remaining **13% of the continental US were existing users allowed to stay** in the AMBIT band- and only **subject to unworkably slow and bureaucratic manual coordination requirements** (in the geographic areas in green and teal on map below).
- Though some call this “sharing,” the reality is a **time-consuming manual coordination** process that can take **70 days per use**.



CBRS: Dynamic Spectrum Sharing

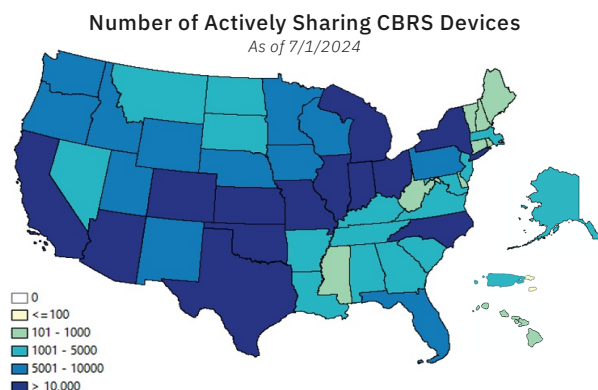
Legitimate Sharing that is Working Today,
Letting New Users Safely Share with Incumbents
3.55-3.7 GHz

CBRS = No Clearing Needed

- With CBRS, **no federal incumbents were forced out of the band**.

CBRS = Real Sharing in All 50 States AND Puerto Rico, USVI, & Guam

- In CBRS, **no existing federal users (a.k.a. incumbents) were forced out of the band**.
- CBRS employs true dynamic spectrum sharing that is both **automatic** and **effectively instantaneous** – AND available and active across the entire country plus Guam, Puerto Rico, and the U.S. Virgin Islands.



AMBIT is a Lose-Lose

Most federal systems had to relocate, and its “sharing” component covers only a very small footprint (13% of the continental US) *and* requires a bureaucratic, months-long “coordination” process. These crippling encumbrances have limited commercial interest to just a few companies.

CBRS is a Win-Win

CBRS allowed existing users to stay in place and its automatic dynamic sharing approach coordinates military and commercial operations instantaneously, protecting existing users and making more, user-friendly spectrum capacity available to meet increasing demand.

AMBIT: Spectrum Segmentation

3.45-3.55 GHz

AMBIT = Manual Coordination Zones (Not Sharing)

Sharing Process: **Manual**

Timeline: **Up to 70 Days Per Use**

- AMBIT delivered **manual coordination zones subject to primitive coordination requirements** in an area covering about **13% of the continental US** (these are the few areas in which incumbents had not already been force-vacated).
- Though some refer to this as “sharing,” the reality is a **burdensome manual coordination** process that can take **70 days per use**.
 - Every time a licensee wants to use this “shared” spectrum, they must **file a separate coordination request for each frequency block in each coordination zone** where they want to operate.
 - So, if a licensee wants to use three 10-MHz blocks encompassing two coordination zones, **they'd need to file six separate coordination requests**.
- In fact, last year, AMBIT licensee T-Mobile complained the coordination with federal users has “effectively precluded licensees” from “providing any service in certain portions of their license areas.”

AMBIT's Unworkably Slow, Manual Coordination in Limited Areas Doesn't Meet User Needs

Users: **23**

Use Cases: **Very Limited**

- Only 23 entities secured licenses in the AMBIT auction.
 - **More than 85% of AMBIT licenses were purchased by AT&T, DISH, T-Mobile (which has since blasted the AMBIT model), and U.S. Cellular (now merging with T-Mobile).**

AMBIT = Lose-Lose

CBRS: Dynamic Spectrum Sharing

3.55-3.7 GHz

CBRS = Legitimate, Dynamic Sharing

Sharing Process: **Automatic**

Timeline: **Near Real-Time**

- With CBRS, **no federal incumbents were forced out of the band**.
- CBRS employs true dynamic spectrum sharing that is both **automatic** and **effectively instantaneous**.

Dynamic Spectrum Sharing in CBRS Works for Incumbents & New Users

Users: **1,000+**

Use Cases: **Effectively Unlimited**

- **More than 1,000 entities are operating in the CBRS band, with more than 400,000 base stations deployed.**
- Users and uses of CBRS increase almost daily and include: mobile cellular, fixed wireless access, manufacturing, agriculture, shipping and airports, sports and entertainment, educational and military use, and much more.

CBRS = Win-Win