**Summary**: Understand the Form 477 [broadband deployment data](https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477) and the changes made to the data as filed prior to its release.

**Fixed Data**

**Field Names / Record Structure**

Below is a list of field names (column headings) in the [fixed broadband deployment data](https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477) and a description of what each means.

* **LogRecNo**: A logical record number created to relate the [broadband deployment tables](https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477) to the [Imputations Table](https://www.fcc.gov/general/imputations-table-broadband-deployment-data)
* **Provider\_Id**: filing number (assigned by FCC)
* **FRN**: FCC registration number
* **ProviderName**: Provider name
* **DBAName**: "Doing business as" name
* **HoldingCompanyName**: Holding company name (as filed on Form 477)
* **HocoNum**: Holding company number (assigned by FCC)
* **HocoFinal**: Holding company name (attribution by FCC)
* **StateAbbr**: 2-letter state abbreviation used by the US Postal Service
* **BlockCode**: 15-digit [census block](https://transition.fcc.gov/form477/Geo/more_about_census_blocks.pdf) code used in the 2010 US Census
* **TechCode**: 2-digit code indicating the [Technology of Transmission](https://www.fcc.gov/general/technology-codes-used-fixed-broadband-deployment-data) used to offer broadband service
* **Consumer**: (0/1) where 1 = Provider can or does offer consumer/mass market/residential service in the block
* **MaxAdDown**: Maximum advertised downstream speed/bandwidth offered by the provider in the block for Consumer service
* **MaxAdUp**: Maximum advertised upstream speed/bandwidth offered by the provider in the block for Consumer service
* **Business**: (0/1) where 1 = Provider can or does offer business/government service in the block
* **MaxCIRDown**: Maximum contractual downstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate)
* **MaxCIRUp**: Maximum contractual upstream bandwidth offered by the provider in the block for Business service (filer directed to report 0 if the contracted service is sold on a "best efforts" basis without a guaranteed data-throughput rate)

**Block-Level Deployment and Competition**

A provider that reports deployment of a particular technology and bandwidth in a particular census block may not necessarily offer that particular service everywhere in the census block. Accordingly, a list of providers deployed in a census block does not necessarily reflect the number of choices available to any particular household or business location in that block, and the number of such providers in the census block does not purport to measure competition.

**Changes Made to the Data as Filed**

The changes are described below and recorded in the [Imputations Table](https://www.fcc.gov/general/imputations-table-broadband-deployment-data).  A description of the deployment data fixed broadband providers are required to file is in the [Fixed Broadband Deployment Formatting Information](https://transition.fcc.gov/form477/FBD/formatting_fbd.pdf) (PDF) document.

**Consumer/Business Indicator and Speed Reporting**

In cases where the data as filed in the Consumer and Business indicator fields were not consistent the data in the corresponding downstream and upstream speed/bandwidth fields, we made the following changes:

* Consumer Indicator
  + If indicator=1 and both bandwidths were 0, the indicator was changed to 0.
  + If indicator=0 and both bandwidths were nonzero, the indictor was changed to 1.
  + If indicator=0 and one of the bandwidths was zero, nonzero bandwidths were changed to 0.
* Business Indicator
  + If indicator=0 and both bandwidths were nonzero, the indictor was changed to 1.
  + If indicator=0 and one of the bandwidths was zero, the nonzero bandwidth was changed to 0.

**Rounding Speed / Bandwidth Data**

All speed/bandwidth values on Form 477 are submitted in Mbps with upto 3 decimal places.  If the downstream or upstream speed/bandwidth as filed was...

* < 1 Mbps, we left the data unchanged
* >= 1 and < 2 Mbps, we rounded to the nearest tenth
* >= 2 and < 10 Mbps, we truncated to the nearest integer
* >= 10 and < 1000 Mbps, we rounded to the nearest integer
* >= 1000 Mbps, the published bandwidth = 1000 Mbps
* = 256 or 512 or 768 Mbps, we assumed the number should have been reported in kbps and divided by 1000

**DBA Name**

If the DBA Name field as filed contained no information that could be used to identify the provider, we replaced it with the Provider Name field.

**Water-Only Blocks**

Records submitted for any water-only census blocks were removed.

**Satellite Data**

Satellite providers that make broadband service available to all of the census blocks in a state [were allowed to submit](https://transition.fcc.gov/form477/FBD/formatting_fbd.pdf) a single block record for that state.  However, the [US - Fixed with Satellite - Dec 15](http://transition.fcc.gov/form477/BroadbandData/Fixed/Dec15/Version%202/US-Fixed-with-Satellite-Dec2015.zip) (CSV) file, as well as the [state-level files](https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477), include the expanded set of blocks to represent all of the areas where satellite service is available.  The expanded set of blocks does not include water-only blocks.  In addition, certain providers filed satellite fixed broadband data, but evidence suggests these providers are not facilities based and we have not included them in the published data.

**Confidentiality Requests**

If a provider submitted a request for confidential treatment of its fixed broadband deployment data in WC Docket No. 11-10, we did not include those data in the published [broadband deployment data](https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477).

**Mobile Data**

**Coverage Area Shapefiles**

A shapefile is a file format for storing, depicting, and analyzing geospatial data.  It is made up of several component files, such as a Main file (.shp), an Index ile (.shx), and a dBASE table (.dbf).  You can open a shapefile in various geographic information software (GIS) programs, including ArcMap, QGIS, and MapInfo.  You can download a shapefile representing the broadband coverage area of each network technology offered by every mobile broadband provider that filed Form 477.

**Changes Made to the Data as Filed**

A description of the deployment data which mobile broadband providers are required to file is in the [Mobile Broadband Deployment Formatting Information](https://transition.fcc.gov/form477/MBD/formatting_mbd.pdf) (PDF) document.

**Speed / Bandwidth**

Filers report the minimum advertised downstream and upstream bandwidths that users should expect to receive for each coverage area filed.  Filers could request confidential treatment of some of their speed data, and those data are not included with the coverage area shapefiles at this time.

**Spectrum**

Filers submitted separate shapefiles for each spectrum band used for each mobile network technology.  Filers could request confidential treatment of their spectrum data, and those data have not been included with the coverage area shapefiles.