

New York Methodology Paper for Round 7 (December 2012) Data Submission to the NTIA under the SBI

April 1, 2013

Executive Summary

The Broadband Mapping Team at the New York State Office of Cyber Security (OCS) is pleased to submit our Round 7 (December 2012) data for the State Broadband Initiative (SBI).

Our goals for Round 7 were to (1) maintain the very high level of participation from our current participating providers; (2) improve our maximum advertised speed data and CAI data; and (3) improve the completeness and quality of the data delivered to the NTIA. We believe we have met those goals.

We had 86 providers participate in the June 2012, Round 6 submission. That number has stayed the same in Round 7. We still have hopes of adding new fixed wireless participants in future rounds. We now have a relationship with the national WISPA organization which is encouraging their members to participate in their state's SBI mapping program. Together with Rick Harnish, WISPA Executive Director, we are currently planning a one day WISP conference in Albany to enhance awareness of both our program and WISPA.

For the second collection period in a row we achieved a significant increase in the quality of new and updated maximum advertised speed data received and we realized the largest incremental increase in the amount of broadband service attributes collected from Community Anchor Institutions. These data improvements were both instrumental in our support of our \$25 million Connect NY grant program aimed at funding strategic infrastructure build out.

We have continued to refine our workflow to improve efficiency and reduce errors, and in Round 7 this allowed us to compile our geodatabase sooner and devote more time to QA/QC than in past rounds. Communication with other states through PBWorks and the interactive webcast provided us with valuable information that solved a technical problem we were having with our delivery geodatabase.

The remainder of this paper provides a summary of our data collection results and describes our methodology for performing data verification.

Provider Participation Summary Tables for Round 7:

0	Potential Providers identified
0	Actual Providers identified
86	Total Participating Providers with data in the submission
67	Wireline Providers
20	Wireless Providers (2 are both Wireless & Wireline)
1	Provider is middle-mile only
42	Providers submitted Middle Mile Data

Technology Type	Wireline Census Block Provider Count	Wireline Service Availability by Census Block	Wireline Street Segment Provider Count	Wireline Service Availability by Street Segment	Wireless Provider Count	Wireless Services by Shapefile	Middle Mile Provider Count	Middle Mile Points
Asymmetric xDSL	38	298,839	34	25,243	0	0	26	1,503
Symmetric xDSL	2	55,381	1	52	0	0	0	0
Other Copper Wireline	2	87,666	2	251	0	0	0	0
Cable Modem - DOCSIS 3.0	6	281,761*	5	27,718*	0	0	3	10
Cable Modem - Other	11	3,946*	10	1,326*	0	0	1	1
Optical Carrier/Fiber to the End User	25	133,488	18	2,613	0	0	8	707
Satellite	0	0	0	0	4	5	0	0
Terrestrial Fixed Wireless - Unlicensed	0	0	0	0	10	18	1	12
Terrestrial Fixed Wireless - Licensed	0	0	0	0	1	1	0	0
Terrestrial Mobile Wireless	0	0	0	0	6	17	2	15
Other (middle-mile only)	0	0	0	0	0	0	1	2

* Time Warner Cable switched all availability to Cable Modem- DOCSIS 3.0 this round resulting in a dramatic decrease in the number of Cable Modem- Other records and an increase in DOCSIS 3.0 records.

Verification List:

1. Automated verification
 - a. Domain and topology rules in delivery geodatabase
 - b. Submission scripts
 - c. Feature dataset cross checks
2. Provider website research
3. Virtual Field Inspections (using Google Streetview)
4. Crowd-sourced data
 - a. NYS Speed Test data points
 - b. FCC Speed Test records
 - c. NYS Broadband Map feedback
5. Use of government data sources
 - a. NY_June2012_Assessment.gdb
 - b. FCC Aggregated 477 Data (*please see note in corresponding narrative below*)
 - c. NYS DMV data
 - d. NYS Lottery terminal data
 - e. NYS Streets and Address ranges
 - f. NYS Orthoimagery
 - g. NYS Police Automatic Vehicle Location (AVL) Data

6. Commercial data sources
 - a. TomTom ILEC, CLEC and Rate Center Exchange Boundary data
 - b. Online look up tools for middle mile & central office locations
 - c. NAVTEQ address points
 - d. Pictometry oblique aerial imagery/Google's Street View
 - e. APNIC Whois database (publically available IP Address search engine)
7. Select Community Anchor Institution (CAI) locations
8. Provider verification maps
9. Clip wireless data to NTIA recommended NYS Boundary and eliminated "cutouts"
10. Removal of 'uninhabited areas'
11. Other Grantee Methodology Papers

Explanation of Verification Activities:

1. **Automated verification** was accomplished via the following methods:
 - a. Domain and topology rules in delivery geodatabase automatically validate features and validate topology
 - b. Submission Scripts: Repeatedly running the NTIA supplied Python script, the Massachusetts modified Python submission script and frequency statistics script, as well as a New York modified version of the NTIA submission script combining elements of the NTIA and Massachusetts scripts
 - c. Feature dataset cross-checks: ESRI 'Frequency' tool used on Provider Name, DBA Name, FRN across feature datasets with cross comparisons to ensure consistency across all of these datasets
2. **Provider Website Research**: The team continues to use the providers' websites to verify provider data submitted for the SBI mapping program. Data most frequently checked are maximum advertised speeds and whether the service offering is business or residential. That later classification is important to NY because our mapping team differentiates business only service on our state map and our Broadband Program Office has recently used that distinction in developing criteria for a capacity building grant.
3. **Virtual Field Inspections (using Google Street View)**
 In June of 2012, two members of the Broadband Mapping Team were trained by members of our Public Utilities Commission staff on how to identify cable and fiber lines amongst the telephone and power lines on utility poles. There are certain distinctive wiring patterns and equipment boxes that identify where cable or fiber is present. After viewing representative schematics and photographs, the trainees spent time identify equipment and cables with Google Street View. Afterwards, the PUC staff took the trainees into the field to field verify the same equipment. This knowledge and technique are now used to investigate areas where a provider's presence on a road was called into question via one of our other verification methods. This is a time intensive verification method but has been found to be very effective in situations where field verification was deemed to be the only other way to investigate a discrepancy.
4. **Crowd-sourced data**
 - a. **NYS Speed Test data points** and attributes were used to verify provider reported availability. The NYS speed test website includes a data collection form which requests:
 - i. Street address at which the test was taken

- ii. Service provider
- iii. Service technology

After satellite provider records and sub-broadband speed records were removed, 7,218 records were successfully geocoded and used for verification. Four levels of verification were established for points that fell within areas of reported service availability. They are:

- Code 1 = Provider and technology matched
- Code 2 = Provider matched and technology unknown
- Code 3 = Provider matched but technology is mismatched
- Code 5 = Provider and technology unknown but Broadband is available at the location

Each census block and street segment availability record involved with this verification activity was assigned one of the above codes.

- b. **FCC speed test records** were used to verify provider reported availability. FCC speed test records lack provider information but we were able to successfully establish the provider via a publically available IP Address search engine (the APNIC Whois Database). Those records were then used to verify provider reported availability in the same manner as was used with the NYS speed test points. Because the technology was not known, the highest verification code assigned was 2 (Provider Matched and Technology = 'Unknown'). Here is a statistical summary.

	Number	Percentage
Total Number of FCC Wireline Speed Test Points	74,984	N/A
Total Number / Percentage Successfully Geo-coded	44,957/74,984	60%
Total Number / Percentage Successfully IP Searched	31,473/44,957	70%

- c. **NYS Broadband Map feedback:** Our state broadband map website is replete with opportunities for the general public to provide feedback. There are “unserved” reporting tools that differentiate between wireline and wireless. The public can see their location show up on our map in the form of a color-coded dot in the Public Feedback layer. Also, there is an *Is this Correct?* application, where users can comment on each of the providers that our map identifies as serving their location. These comments and complaints arrive in a separate public notification mailbox. We have a team member in charge of monitoring this inbox and crafting a personal response to each. Despite these noble efforts towards “ground truthing”, changes to some provider’s websites have reduced the opportunities for us to use this feedback to improve our map.

Previously, we had used the “availability checkers” on the larger provider websites to enter the unserved address to corroborate that indeed they do not serve it. We then checked a diverse sampling of other known addresses in that block or street segment, and if no service was available, we would remove the suspect block as being served by the provider. In the past year, Verizon has made it nearly impossible to run a string of these searches by blocking IP addresses that use their application frequently. This occurred during Round 6, and during Round 7, there was an edict added to their website stating that use of their application is for potential customers only. This left Time Warner Cable as the only major provider whose address inventory we could easily search. However, several months ago their availability checker changed. There no longer is an obvious place on the site where a user can just keep typing in a string of addresses to check availability. Instead, you have to click a ready to order

button, then pretend to begin setting up service before you have the option of typing an address. More problematic is the fact that TWC now seems to indicate serving any address they may someday consider serving, not just places where their service is already available. Many public e-mails exhibiting frustration have arrived in our mailbox confirming this. The feedback claims the TWC site says they have various broadband options, but when they call them, they say no, they send them a contradictory letter, or they may come out to the residence and offer a multi-thousand dollar hook-up fee option. In one case, a potential customer bought his house after checking to TWC's website to make sure high speed internet was available there. The website indicated it was available, but after he moved in the house and tried to order it, Time Warner told him that existing service was over 2 miles away and there would be a \$62,000 hook-up fee to obtain their service at his residence!

In addition to feedback on the large providers, we also receive feedback for the smaller to mid-tier cable and DSL companies. Since they do not have sophisticated websites with availability checkers to corroborate the public assertions, it has been our policy that we cannot remove any census blocks for those providers, despite valid suspicions on our part backed by crowdsourcing feedback. An example of this is with Mid-Hudson Cablevision, where their service territory footprint is clearly disputed by the unserved wireline reports that can be viewed on our map.

Given these setbacks, in person field checking may be our only option for validating public feedback that contradicts provider supplied information. We will still use tools such as Google Street View on a limited basis to check plant data to help clear up conflicting information, but we will be investigating new methods to more consistently leverage data collected from our public feedback tools to whittle away at provider-centric data. Though there may be some exaggerated comments and biased data we will need to filter out, we will have to further entrust the populace with helping us if we want to do an even better job at mapping broadband reality.

5. Use of government data sources:

- a. **NY_June2012_Assessment:** The NTIA Assessment Database from Round 6 can be used to verify provider reported availability, technology type, max advertised download and max advertised upload speeds in Census 2010 blocks. In Round 7, data received from providers were tested against this assessment geodatabase to determine if blocks and streets not included in the current submission from the provider should be removed or left in the current submission to the NTIA. Based on the nature of some of the data submissions, the assessment data was also used to identify blocks that are candidates for removal. However, since companies report also on where they could provide data within the 7 to 10 day window, we realize that verification will not be exact. Any provider whose submission remains unchanged and who have blocks or street segments with low scores will be asked to verify that those blocks are correct. **Note: An earlier delivery of the assessment database for Round 7 would be very helpful so that verification could allow more interaction with providers prior to submission for Round 8 rather than being an "after the fact" adjustment.**
- b. **Aggregated FCC 477 data** were used in Round 5 to identify providers by tract, speeds above and below 3 mbps, and business vs. residential offerings. In Rounds 6 and 7 we used this previous data as a benchmark to review new data received. We will update our findings when new A477 data is made available to grantees.
- c. The **NYS Department of Motor Vehicles** supplied three datasets for our independent verification activities. A list of 2,080 unique Satellite Offices, Dealer Locations and Inspection Station Locations were used to verify provider reported availability. *All of these facilities have broadband connections.* The Dealer and Inspection Location datasets did not have provider or technology information associated with the locations. Therefore, the highest verification code assigned to any Census Blocks containing the points and Street Segments within 500 feet of the points was a 5 because we were only able to confirm that there was broadband at those locations. However, the DMV Satellite Offices dataset came with provider information, so any Census

Blocks containing the points and Street Segments within 500 feet of the points that matched the provider name were assigned a verification code of 2.

- d. **The NYS Lottery** supplied a dataset to add to our independent verification sources. The majority of the Lottery data we received did not have provider or technology information associated with it, so it could not be determined if many of the sites *actually* had access to a broadband connection. However, there were 276 Lottery terminal locations that had provider information associated with them. These locations were *confirmed* to have broadband connections and therefore any Census Blocks containing the points and Street Segments within 500 feet of the points that matched the provider name were given a verification code of 2.
- e. **NYS Streets and Address Ranges** is a dataset we use to submit all of our provider data in census blocks > 2mi². They are also used as part of our geocoding. Street address ranges are also used in verification of provider data by testing addresses along segments with online provider service look-up tools (“availability checkers”).
- f. **NYS Orthoimagery** was used as an aid during provider data processing.
- g. **NYS Police Automatic Vehicle Location Data** was obtained as a potential verification source for Verizon Wireless’ coverage area. Basically, the data are records of communication between an air card in a police cruiser and a Verizon Wireless server. In order to evaluate its usefulness, the State Police IT unit provided a week’s worth of data (over 4 million records!). For security and privacy reasons, all of the attributes were stripped except for a combined date/time field (which contained date/hours/minutes/seconds/Eastern Daylight), Longitude and Latitude fields. The data were given to us in .dbf format, which was used to create points based on the latitude and longitude values. The AVL data points were then overlaid onto the Verizon Wireless data from Round 6. We expected to be able to pick out areas that were reported as covered by Verizon Wireless that may have had poor or no coverage based on points (or lack thereof) in the NYSP AVL data. The comparison did not prove to be as useful as we had hoped as the AVL data did not always correspond well with the Verizon Wireless coverage area. It was difficult to tell in many areas if the Verizon Wireless coverage was spotty or if the road was just sparsely travelled by NYSP vehicles. On roads that were travelled heavily by the NYSP, it was difficult to tell which point corresponded to a specific vehicle since all of the vehicle identification information had been removed. The only way to tell was by looking at the combined date/time field and seeing which points along the same road were a few minutes apart as opposed to several hours apart. We also discovered that there were areas where Verizon Wireless does not claim to have service but the AVL data points tracked right through them like there was full coverage. We thought this could potentially be caused because the NYSP air cards use SMS to send location information. SMS can be successfully transmitted in areas where the cellular service is too weak to successfully make a voice call or use the internet. Since we were not able to distinguish between NYSP vehicles and the fact that there were points in areas that Verizon did not claim to cover, we were not confident that this data could be used a make changes to data provided by Verizon Wireless. We do not plan to repeat this process again.

6. Commercial data sources:

- a) **TomTom ILEC, CLEC and Rate Center Exchange Boundary data** were used to verify provider reported availability. The TomTom data included boundaries for many of the broadband providers we have received data from. During data processing, TomTom boundaries for each provider included in the dataset were overlaid onto the provider blocks and street segments footprint to ensure that the availability data sent to us by the providers fell reasonably within the respective boundary in the commercially available TomTom

data. All of the provider footprints that had matching boundaries in the TomTom data fell within their respective boundary. In one case, Verizon New York, the ILEC boundary was used to remove outlier data. Discontinuous blocks and streets submitted that fell more than one mile outside Verizon's ILEC boundary was removed. The TomTom Exchange Boundary data was used to further improve broadband availability and middle mile data for Frontier Communications. Their DSLAM data is CLLI-coded which are tied to specific exchanges. By using the exchange boundary dataset we were able to improve the accuracy of many of Frontier's DSLAM and Central Office locations, and thereby improve the blocks and streets broadband data for Frontier overall.

- b) **Online look up tools for middle mile & central office locations:** Additional publicly available CLLI code location lookups were used to supplement the refinement of Frontier's DSLAM locations: *Marigold Technologies* Central Office Lookup Tool (<http://www.marigoldtech.com/lists/co.php>) and *TelcoData.us* (<http://www.telcodata.us/>) online search tools. Further research into these or other publicly available datasets may help us add to, refine, and verify our middle mile and broadband availability data for all of our facilities-based broadband providers.
 - c) **NAVTEQ Address Points** were also used as an aid during provider data processing, for geocoding address data, and also in the verification of provider data by testing addresses with online provider service look-up tools
 - d) **Pictometry oblique aerial imagery/Google's Street View:** In the process of improving the CAI point location accuracy, we are using the CAI's website, Bing's Bird View (Pictometry Oblique Aerial Imagery) and Google's Street View function to provide us information to accurately put the points on the rooftop of the building. The CAI website can provide information about name, address, and exterior pictures of the CAI. With this information, we can use Google's Street View to identify the exact location of the building, either by matching the pictures or looking at signs. If Google's Street View failed to provide enough clues to be certain, we will use the Bing's Bird View to identify the exterior look of the building and try to match that with the pictures from the homepage. Additionally, we can look for adjoining clues such as a playground around the building if we are looking to improve a school CAI point.
 - e) **APNIC Whois database**, as mentioned above, was used add provider information to FCC speed test records.
7. **Select CAI locations** were used to verify provider reported availability. Through our continuing relationship with the University at Albany's Center for Technology in Government (CTG), we acquired 1,459 new, complete broadband service details for CAI records during the Round 7 data gathering process. This brings CTG's total number of CAI records attributed with broadband information to 3,940. Each of these records was used to verify the provider reported data. Where the information matched, the highest verification code was assigned (1 = Provider and technology matched). We also selected Colleges, Hospitals, Federal Correctional Facilities, State Prisons and State Police Stations from our total collection of previously identified CAIs to be used as an additional verification data source. As previously stated, while we do not have complete service details for some of these facilities, we strongly believe all have broadband connections and therefore are a good supplemental verification data source. CTG is currently focusing their outreach on institutions within the Medical/Healthcare and Other Community Support - Government CAI categories. Many of these institutions records will be available for verification for Round 8 data.

8. **Provider verification maps:** For providers with significant changes from the previous round, we created review maps showing Round 6 availability aggregated to census blocks and street segments. The providers were given at least five days to respond and initiate any changes or corrections. Changes were made based on provider feedback. Changes were documented for future reference.
9. **Clipping all wireless data to the NTIA recommended NYS boundary file** to help ensure topological compliance for all wireless availability to be wholly within New York State.
10. **Removal of ‘uninhabited areas’:** These areas have been classified as land where development cannot occur, and where household wireline broadband will not be needed at any foreseeable time. If the center of a census block with no population or housing units falls within an uninhabitable area, the entire census block $\leq 2\text{mi}^2$ or all street segments within an identified block $> 2\text{mi}^2$ are classified as uninhabited. We remove uninhabited blocks and streets from the provider submission data. The classifications of uninhabited lands include, but are not limited to: water, wilderness lands, reforestation areas, as well as portions of state parks, federal nuclear sites, and recreation areas.
11. **Other Grantee Methodology Papers** from previous round(s) were researched to identify potential mergers & acquisitions of national providers serving in New York, and to obtain ideas for future verification measures.

New York Methodology Outreach List:

As directed by the SBI Program Office in the March 26, 2012 delivery webinar, New York has included only providers who submitted data, or those who have been identified as true potential providers, in our Round 7 Data Package.xls.

The following “outreach list” is a summary of providers not included in Data Package.xls. This list represents the volume of companies that New York has researched, contacted and, in some cases, received data from in previous and current data cycles. The list includes:

- Companies found to be “not a provider”
- Providers who do not serve New York
- Broadband equipment companies
- Providers who chose to opt-out of the program
- Resellers

Providers are identified by DBA name, provider type, and status. Comments are included for additional details.

Filing Company DBA	Provider Type: Broadband=1 Reseller=2 Other=3 N/A=4	Provided Data, Will provide data, Will Not provide data, Non- Responsive	Comments
2nd Century Communication	4	Will Not Provide Data	Purchased by Covad
3M Telecom Systems Division	4	Will Not Provide Data	Supplier of equipment to broadband providers
8x8, Inc.	4	Will Not Provide Data	Voice only.
A.R.C. Networks, Inc	4	Will Not Provide Data	Cannot identify this company or what they provide
ABA Net, LLC	4	Will Not Provide Data	Voice services
ACC Business	2	Will Not Provide Data	Emailed to indicate they cannot participate
ACC National Telecom	4	Will Not Provide Data	Voice/data infrastructure company
Access One, Inc.	2	Will Not Provide Data	Business only reseller.
Access Point, Inc.	2	Will Not Provide Data	Reseller.

Accessline Communications Corporation	4	Will Not Provide Data	Voice only.
ACCESSLINE COMMUNICATIONS CORPORATION	4	Will Not Provide Data	voice/telephony services
Ace Innovative Networks	2	Will Not Provide Data	Have contacted previously but reseller status was low priority for R5.
Ace Innovative Networks, Inc.	2	Will Not Provide Data	Reseller of Verizon.
Acella, Inc.	4	Will Not Provide Data	Voice only.
ACN Communications	4	Will Not Provide Data	Reseller "requires a pre-existing connection"
ACN Digital Phone	4	Will Not Provide Data	Voice/phone only.
Adelphia Cable	1	Will Not Provide Data	Does not provide services to NYS customers
Aeroblaze Broadband	4	Will Not Provide Data	Website listed will not open, no Google results.
Airband	4	Will Not Provide Data	Does not operate or have a market in New York
Airespring, Inc.	2	Will Not Provide Data	"Airespring, Inc. is a reseller of underlying carriers Only."
Allegiance Telecom, Inc.	4	Non-Responsive	Purchased by Qwest; no answer through two phone lines
Alliance Group Services, Inc.	3	Will Not Provide Data	Quote: Connects CLECs and ILECs to global network
AlreadyNet	3	Non-Responsive	Discovered in R5. Not a Provider
American Fiber Network, Inc. (AFN)	3	Will Not Provide Data	Company solely provides EVDO wireless cards
American Fiber Systems, Inc.	3	Will Not Provide Data	Sold to Zayo
American Telephone Co. LLC	4	Will Not Provide Data	"Not a provider" on Form C.
American Tower	3	Will Not Provide Data	Wireless tower company/infrastructure
Amextel	4	Will Not Provide Data	Voice services
AMp Networks LLC	4	Will Not Provide Data	Very unclear what they provide.
ANPI	3	Will Not Provide Data	Infrastructure/backbone- not end user.
Apptix, Inc.	4	Will Not Provide Data	Voice only.
Aptela, Inc.	4	Will Not Provide Data	Voice only.
Atlantech Online, Inc.	2	Will Not Provide Data	Reseller, few NY customers, not willing to participate.
Atlantic Telecommunications Services Corp.	4	Will Not Provide Data	Company provides cable services related to the NYS legislature (6/29/10 phone)
Backbone Communications Inc.	2	Non-Responsive	Reseller to businesses only; concentrated in NYC.
Bandwidth.com	2	Will Not Provide Data	CLEC. Buys services in bulk & resells portions to various customers
BCN Telecom Inc	4	Will Not Provide Data	Voice services
Bell Canada	4	Will Not Provide Data	Does not provide services to NYS customers
Bellsouth	4	Will Not Provide Data	Bellsouth serves 9 southern states; is related to AT&T.
Belmont Telecom	4	Will Not Provide Data	VoIP Wholesale, Long Distance, Roaming.
BestWeb Corp.	2	Will Not Provide Data	Not interested in participating.
BetterWorld Telecom LLC	3	Will Not Provide Data	Outside of NY state.
Birch Communications, Inc.	3	Will Not Provide Data	Outside of NY state.
Blue Wireless	1	Non-Responsive	Discovered from Tom Tom data summary. Left message with Rene Whalen. No Response.
BridgeCom International, Inc.	4	Will Not Provide Data	Purchased by Broadview Network Holdings
Bridgevoice, Inc.	4	Will Not Provide Data	International voice carrier.
Broadband Dynamics, LLC	2	Will Not Provide Data	Cannot determine what this company does- most likely reseller
Broadcore, Inc.	2	Will Not Provide Data	Reseller, data will be provided through Level 3.
Broadstar, LLC	3	Will Not Provide Data	Offers broadband within rental/condo communities. not public, more a reseller to communities
Broadview Networks	2	Will Not Provide Data	Reseller
BroadvoxGo!, LLC	3	Will Not Provide Data	Trunking and VoIP. not a provider.
Broadwing Communications	2	Will Not Provide Data	Broadwing's data will be provided by Level3
BT COMMUNICATIONS SALES LLC	4	Will Not Provide Data	Cannot identify services provided.
Budget Phone	4	Will Not Provide Data	Pre-pay phone- not a provider. Cannot identify website.
Buffalo Wireless	3	Non-Responsive	Not a Provider
BullsEye Telecom	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.

Burlington Telecom	3	Will Not Provide Data	Not a broadband provider in NY.
Business Automation Technologies	2	Will Not Provide Data	Reseller, no NY customers
Business Productivity Solutions	4	Will Not Provide Data	Cannot determine services. Not a broadband provider.
Cable Positive	4	Will Not Provide Data	Provides educational programming about HIV/AIDS
Cable Services Company, Inc.	4	Will Not Provide Data	Provides broadband construction services, not broadband.
Cablevision Systems	4	Will Not Provide Data	This company provides internal networking and voice systems.
Call Catchers Inc.	4	Will Not Provide Data	Virtual receptionist- not a provider, not in NY.
Catskill Mountain Cablevision	4	Will Not Provide Data	Now owned by Mid-Hudson Cable
Cause Based Commerce Incorporated	4	Will Not Provide Data	Voice only.
Cavalier Telephone; Cavalier Business Communications; Cavalier Telephone and TV	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
CBN Connect, Inc.	3	Will Not Provide Data	Infrastructure/Backbone
Chain Lakes Cable	4	Will Not Provide Data	Company does not provide broadband to NYS customers.
Charter Communications Plattsburgh	4	Will Not Provide Data	
Cincinnati Bell	1	Will Not Provide Data	Discovered on FCC 477 list; does not offer wireline service in NY.
Cingular Wireless	3	Will Not Provide Data	Provides data through AT&T
Citizens Cablevision	4	Will Not Provide Data	Provides through Citizens Telephone of Hammond
Comcast Networks	3	Will Not Provide Data	
CommPartners, LLC	3	Will Not Provide Data	VoIP, co-location, reseller.
Communication Solutions Partners	3	Will Not Provide Data	Internet reseller previously researched. Website not active any longer.
Communications Network Billing, Inc.	4	Will Not Provide Data	Phone only
Comp Direct USA	3	Will Not Provide Data	Has nothing to do with broadband.
Computer SOS	4	Will Not Provide Data	Does not offer wireless to end user, only wireless networking.
ConnectMe, L.L.C.	4	Will Not Provide Data	Has nothing to do with broadband.
Cordia Communications Corp.	4	Will Not Provide Data	Phone only
CornerStone Telephone Company	2	Will Not Provide Data	Re-seller of Verizon services
Cox Communications	3	Will Not Provide Data	Does not provide services to New York State.
Crown Castle International	3	Will Not Provide Data	Does not provide end user services. Infrastructure only.
CSP Telecom	4	Will Not Provide Data	Voice services only.
Current Communications	4	Will Not Provide Data	Discovered on WISPA list, No wireless offerings.
Custom Network Solutions	3	Will Not Provide Data	Telecom solutions, T1, VoIP, Reseller.
cyberMIND	4	Will Not Provide Data	Does not provide broadband services.
Cypress Communications, Inc.	3	Will Not Provide Data	Not a BB provider. Trunking/colocation, etc.
DANC	4	Will Not Provide Data	DANC is primarily a backbone infrastructure company
Deposit Cable Television Inc.	4	Non-Responsive	Phone out of service; no online information (3/22/10)
Devine Communications, Inc.	4	Will Not Provide Data	Cannot identify company. Does not provide broadband.
DFT Communications/Netsync	2	Will Not Provide Data	
DHAKA TELECOMMUNICATION CORP	4	Will Not Provide Data	Bangladesh Not a NY/US provider
diDi Wireless Communications	4	Non-Responsive	Not a Provider
Direcway	3	Non-Responsive	Satellite (?) service, will attempt to add when available in NYS
Dish Network	3	Will Not Provide Data	Television only
Douglas Computing Tech	2	Will Not Provide Data	Reseller, few NY customers, not willing to participate.
Downsville Community Antenna	4	Will Not Provide Data	Planning to close in summer 2010
Doylestown Cable TV	3	Will Not Provide Data	Does not serve NY.
Dream Catcher Communications	4	Will Not Provide Data	Provides advertising & marketing to NYS agencies and government offices
DSCI	2	Will Not Provide Data	Business only reseller. Left message.
DSL Communications, LLC	3	Will Not Provide Data	Cannot determine companies services.
DSL Extreme	2	Non-Responsive	Identified as a reseller, low priority for R4 outreach.
DSL.net	4	Will Not Provide Data	Company dissolved in December 2009.
DSLi	3	Will Not Provide Data	Serves S. Florida only

Earthlink	2	Will Not Provide Data	Reseller
East 2 West Networks Inc.	4	Non-Responsive	Phone disconnected; web site cannot be found.
East Telecom, Inc.	4	Will Not Provide Data	No website or contact information
ECR Voice, LLC	4	Will Not Provide Data	Phone services only.
Electric Lightwave	2	Will Not Provide Data	Purchased by Integra Telecom, which serves only the Northwest
Empire City Subway	3	Will Not Provide Data	Not a broadband provider.
Empire One Telecom (EOT)	2	Will Not Provide Data	Reseller
Encompass Communications	4	Will Not Provide Data	Calling Card Services
Endstream Communications, LLC	3	Will Not Provide Data	Does not supply end-user internet.
Engineered Communication Systems, Inc	4	Will Not Provide Data	Cannot verify company type- no valid website.
Enhanced Communications Network, Inc.	4	Will Not Provide Data	Voice only. From website: leading telecommunications carrier providing local service in California, New Jersey and New York.
Enventis Telecom Inc.	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
Equant, Inc.	4	Will Not Provide Data	Not a broadband provider.
Ernest Communications	4	Will Not Provide Data	Business only reseller.
Eschelm Telecom	3	Will Not Provide Data	Owned by Integra Telecom, which serves only the Northwest
Eureka Telecom	4	Will Not Provide Data	Cannot identify company- Eureka Telecom or Eureka Broadband.
EURO CONNECT	4	Will Not Provide Data	Voice services only.
Evercom Systems, Inc.	3	Will Not Provide Data	Does not provide broadband services.
eVolve Business Solutions LLC	4	Will Not Provide Data	VoIP only.
Evolve IP, LLC	3	Will Not Provide Data	Cloud computing- not a provider.
ExteNet Systems	3	Will Not Provide Data	Identified as broadband equipment business for wireless companies.
FASTNET	4	Will Not Provide Data	Discovered on WISPA list, may be part of PAETEC and does not have wireless.
Fidelity Voice Services LLC	3	Will Not Provide Data	Not a provider for NY.
Fionda VOIP, LLC	4	Will Not Provide Data	VoIP company- may not be in NY.
First Communications, LLC	3	Will Not Provide Data	Fiber backbone in NY. Will make contact for R5 for middle-mile.
Fribley Enterprises	4	Will Not Provide Data	Phone out of service; no online information
Gafachi	3	Will Not Provide Data	Provides wholesale VoIP services to providers and resellers.
GAW High Speed Internet	4	Will Not Provide Data	Does not appear to serve NY
Global Capacity Group, Inc.	4	Will Not Provide Data	Provides network services to telcom industry. Not a provider to end users.
Global Crossing	4	Will Not Provide Data	Letter indicates they cannot provider in 7-10 days.
Global Protection Communications Systems	3	Will Not Provide Data	Provides fiber infrastructure.
Globalinx	4	Will Not Provide Data	Reseller, VOIP. No applicable to program.
Globalnet Telecom, Inc.	4	Will Not Provide Data	Hosted PBX provider- no broadband.
GlobalPhone Corp.	4	Will Not Provide Data	Hosted PBX provider- no BB
Gore Mountain Cable TV	3	Will Not Provide Data	Cable TV only- PSC lists their franchises as 'No Broadband'
Granite Telecommunications, LLC	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
Great North West Telegraph Co	4	Will Not Provide Data	Company is closed.
GreatCall, Inc.	3	Will Not Provide Data	No data- cell/voice only
GTC Communications	3	Will Not Provide Data	Cannot identify company.
Hancel, Inc.	4	Will Not Provide Data	Cannot find any information on this company.
Hancock Video	3	Will Not Provide Data	Hancock Video does not provide broadband.
Hickory Tech	4	Will Not Provide Data	Added in R5, found on 477 data. Does not serve NY.
High-Speed Solutions	2	Will Provide Data	Reseller
Hilltop Communications, Inc.	3	Will Not Provide Data	Part of GTEL (Germantown Telephone)

Horizonone Communications, Quantumlink Communications, Voip Communications, Optic Communications, ANI Networks	4	Will Not Provide Data	Voice services only.
Hotwire Communications, Ltd.	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
Hudson Valley DataNet	3	Will Not Provide Data	Merged with Lighttower Fiber networks.
Hughes Network Systems	1	Will Not Provide Data	Satellite company; did not send data.
iBasis	4	Will Not Provide Data	Voice services.
iCore Networks, Inc.	4	Will Not Provide Data	Phone services.
IDT Corporation	4	Will Not Provide Data	Phone services.
IKANO	3	Will Not Provide Data	No end-users. Infrastructure only.
InPhonex.com, LLC	4	Will Not Provide Data	Phone services.
Insight Broadband	3	Will Not Provide Data	Serves only Ohio and Kentucky
Integra Telecom	3	Will Not Provide Data	Provides broadband in the Northwest
Integrated Services, Inc.	4	Will Not Provide Data	Voice services.
Intellifiber Networks	3	Non-Responsive	Infrastructure fiber for business and providers. No end users. Will look for middle mile in future rounds.
Interface Security Systems, LLC	4	Will Not Provide Data	Not a provider.
InterGlobe Communications	2	Will Provide Data	Reseller- low priority for R4 outreach
Internet Professionals & Network Solutions (IPNS)	2	Will Provide Data	Reseller- low priority for R4 outreach
Internet@ntc, Inc.	4	Will Not Provide Data	No idea who or what they are/do.
Interstate FiberNet, Inc.	4	Will Not Provide Data	Part of Deltacom- now part of Earthlink Business. Business only.
ION	3	Will Not Provide Data	Infrastructure only.
IP Communications, LLC.	4	Will Not Provide Data	Phone services.
IP Networked Services, Inc.	3	Will Not Provide Data	Business only reseller.
IPC Network Services, Inc.	4	Will Not Provide Data	Network equipment business- not a provider
Jet Wave Corporation	3	Will Provide Data	Email sent to Mr. Klein- cannot find any information on this company.
JetWeb	1	Non-Responsive	May be out of business
Jivetel Communications	4	Will Not Provide Data	Voice only.
Kosmaz Technologies LLC	4	Will Not Provide Data	Voice services only.
LaunchNet	2	Will Provide Data	Reseller
LCR Telecommunciations, LLC	4	Will Not Provide Data	Wholesale long distance.
LDC Telecommunications Inc	4	Will Not Provide Data	Cannot identify company. website blocked.
LDMI Telecommunications, Inc.	3	Will Not Provide Data	Same address as Talk America; website goes to Cavalier.
LI Sky	4	Non-Responsive	Discovered in R5. Not a Provider
Light Tower Fiber Long Island LLC	1	Will Not Provide Data	Cannot provide service within 7-10 days.
LightEdge Solutions, Inc.	3	Will Not Provide Data	Does not provide broadband to NY customers, does not wish to participate.
Lighttower	3	Will Not Provide Data	Cannot provide service within 7-10 days.
Lightspeed Fiber Network	3	Will Not Provide Data	Lightspeed closed; phone transfers to Thalle Industries Inc., which does not provide broadband services.
LightSquared LP	3	Will Not Provide Data	Wireless backbone/wholesaler.
Lightyear Network Solutions, LLC	2	Will Not Provide Data	Reseller- may not fit 7-10 day req.
Line Systems, Inc.	2	Will Not Provide Data	Reseller.
Localnet	4	Will Not Provide Data	Dial up service only
Looking Glass Networks, Inc.	3	Will Not Provide Data	Acquired by Level3 Communications in 2006
Luzip Telecom Inc.	4	Will Not Provide Data	Voice only.
M5 Networks, Inc.	4	Will Not Provide Data	Voice only.
Magellan Hill	4	Will Not Provide Data	Telecom management company.
Matrix Telecom, Inc.	4	Will Not Provide Data	Reseller.
McGraw Communications, Inc.	3	Will Not Provide Data	Business only reseller, co-location, etc.
MCI Communications Services, Inc.	3	Will Not Provide Data	Voice only- data services provided by Verizon.

MCImetro Access Transmission Services LLC	3	Will Not Provide Data	Cannot identify.
Mediacom	4	Will Not Provide Data	Does not provide broadband to NY customers
Megapath	2	Will Not Provide Data	Requested removal from call list.
Meriplex Communications, Ltd.	2	Will Not Provide Data	Reseller, no NY customers
Metropolitan Fiber System of New York	1	Will Not Provide Data	Verizon Business Global letter indicates MFS cannot provide in 7-10 days
Metropolitan Telecommunications Holding Company	3	Will Not Provide Data	Reseller, does not provide broadband.
MFS of New York, Inc.	3	Will Not Provide Data	Verizon Business Global letter indicates MFS cannot provide in 7-10 days
Middleburgh Telephone	3	Will Not Provide Data	Seamless Geoport Communications does not provide BB
Milestone Communications of NY	3	Will Not Provide Data	Does not provide broadband to NY customers
Millicorp	4	Will Not Provide Data	VoIP and voice only.
Mitel Netsolutions Inc.	2	Will Not Provide Data	Reseller.
MIX NETWORKS, INC.	4	Will Not Provide Data	Voice services.
MKL.net	4	Non-Responsive	Discovered in R5. Not a Provider
My Tel Co, Inc.	4	Will Not Provide Data	part of Cordia- VoIP only.
Navigator Telecommunications, LLC.	4	Will Not Provide Data	Voice services
NBC TV	3	Will Not Provide Data	NBC TV - does not provide broadband services
NECC TELECOM	4	Will Not Provide Data	Voice/long-distance service.
Net One International, Inc.	4	Will Not Provide Data	Voice/long distance/calling cards
NetCarrier	4	Will Not Provide Data	Voice/pbx/data. not a bb provider.
Netifice Communications	3	Will Not Provide Data	purchased by Megapath in 2006
Netlogic, Inc.	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
Netsville	4	Will Not Provide Data	Discovered on WISPA list. Does not provide wireless to end user-networking only.
Network Billing Systems LLC	2	Will Not Provide Data	Reseller.
Network Communications International Corp.	4	Will Not Provide Data	Provides voice services for inmate/correctional population
Network Innovations	1	Will Not Provide Data	Provides broadband in MA & NH; very limited data service in NY
Network Operator Services, Inc	3	Will Not Provide Data	Cannot identify this company.
Network Service Billing, Inc.	4	Will Not Provide Data	Voice/long-distance services
New Edge Networks	2	Will Not Provide Data	Reseller that cannot provide within 7-10 days.
New Jersey DataNet Telecom, LLC	3	Will Not Provide Data	Lighttower Fiber Acquired DataNet Communications Group.
New York RSA 2 Cellular Partnership (Verizon Wireless)	3	Will Not Provide Data	Provides data through Verizon wireless/Cellco Partnerships
NexGen Networks Corporation	2	Will Provide Data	Non responsive in previous rounds.
NextGen Telephone	4	Will Not Provide Data	NextGen Telephone has ceased operations effective January 24, 2011.
Nextlink Wireless	2	Will Not Provide Data	
NextWave Wireless	2	Will Not Provide Data	No end user service
nexVortex, Inc.	2	Will Not Provide Data	Reseller.
NightOwl Internet Gateway	3	Will Not Provide Data	Email indicated company provides BB primarily in Missouri; not in NYS
NobelTel	4	Will Not Provide Data	Voice services only
North Penn Telephone	3	Will Not Provide Data	Offices located in NY, does not serve NY.
Northeast Optic Networks	3	Will Not Provide Data	Merged with Sidera
Northland Networks	2	Will Not Provide Data	Northland leases all of its facilities from its parent company, Oneida County Rural Telephone.
Northstar Telecom	3	Will Not Provide Data	Called previously- not responsive. May not provide in NY.
NOS Communications, Inc.	4	Will Not Provide Data	Toll free and out-bound telephone services
NOSVA Limited Partnership	4	Will Not Provide Data	Same as NOS communications- voice services only.
NTCNet Telecom, Inc.	3	Will Not Provide Data	NTCNet Telecom, Inc. is a small CLEC that operates as a subsidiary of Newport Telephone Company.

Nuvox	4	Will Not Provide Data	
NYSYS Broadband	1	Will Not Provide Data	Discovered on WISPA list. Business only fixed wireless in Rochester area. Called 12/14 and left voicemail.
Ojo Service LLC	4	Will Not Provide Data	Video/voice service.
OLS Inc.	4	Will Not Provide Data	Cannot identify this company or its services.
Omnipoint Communications	3	Will Not Provide Data	Small northeast wireless company, acquired by VoiceStream which is now T-Mobile.
One Communications	2	Will Not Provide Data	
One Source Networks	2	Will Not Provide Data	Global partner- reseller.
OneLink Communications, Inc.	4	Will Not Provide Data	Company located in Puerto Rico
Online Image	4	Will Not Provide Data	Discovered on WISPA list. Does not supply BB.
OnWav, Inc	2	Will Not Provide Data	Reseller- does not serve NY.
Open Access	4	Will Not Provide Data	Discovered on WISPA list. Website redirects to Lighttower Fiber
Open Access Inc.	3	Will Not Provide Data	Open Access is now LightTower Communications
Optimum TV	3	Will Not Provide Data	Company provides data through CSC holdings
Pac-West Telecomm, Inc.	3	Will Not Provide Data	Broadband Infrastructure
PAD Business Solutions	2	Will Not Provide Data	Reseller, does not serve many NY customers, does not wish to participate.
PAETEC	2	Will Not Provide Data	Company acquired by Windstream.
Pannon Telecom, Inc.	4	Will Not Provide Data	International voice/phone
PCCW Global, Inc.	3	Will Not Provide Data	HKT is Hong Kong Telephone- PCCW is subsidiary.
Peerless Network of New York, LLC	3	Will Not Provide Data	Backbone voice services.
PeoplePC	2	Non-Responsive	Non responsive in previous rounds.
Phone.com, LLC	4	Will Not Provide Data	Voice only.
PNG Telecommunications	4	Will Not Provide Data	Phone services only
posTrack Technologies, Inc.	4	Will Not Provide Data	Voice services for colleges.
PowerDSL	3	Will Not Provide Data	Likely reseller, web search returns inactive website and little results.
PowerNet Global	2	Will Not Provide Data	Likely reseller, very unclear website
Premier Wireless	1	Will Not Provide Data	Premier Wireless was closed
Proximiti Technologies, Inc.	3	Will Not Provide Data	Primarily voice and phone tracking Offers internet as reseller.
QTel	4	Will Not Provide Data	VoIP- provides DSL in select areas only.
QuantumShift Communications, Inc.	3	Will Not Provide Data	Manages carrier service. Not a provider.
Qwest Communications Company	3	Will Not Provide Data	Qwest is now Century Link. http://www.centurylink.com/index.html
RAI Telecom, Inc.	3	Will Not Provide Data	VoIP services.
Razorline LLC	4	Will Not Provide Data	May not be in NY. Voice services.
Real Linx	2	Will Not Provide Data	Reseller
Reliance Globalcom	2	Non-Responsive	Reseller
RGT Utilities, Inc.	4	Will Not Provide Data	Utility company in Calif. cannot identify website or more information.
RGTS (Rockefeller Group Technology Solutions)	2	Will Not Provide Data	Provides broadband to specific businesses, does not wish to be on the map, has confidentiality concerns; Legal department advised them not to participate (6/29/10 phone)
RNK Communications	4	Will Not Provide Data	Reseller/voice services- difficult to identify services provided. Not and end user BB provider.
SAVVIS Communications	3	Will Not Provide Data	Cloud, Colocation, VoIP, etc. No BB provider. Acquired by CenturyLink.
SBA Communications Corp.	3	Will Not Provide Data	Provides tower site management and locations for cell and wireless companies.
SBC	4	Will Not Provide Data	phone goes directly to AT&T.
Semperon	2	Will Not Provide Data	Reseller with network partnerships
Silv Communication Inc.	4	Will Not Provide Data	Worldwide telephone service. Not a BB provider.
SinglePipe Communications	4	Will Not Provide Data	Company hard to find. Possible merge- voice services only.
Smart Choice Communications	2	Will Not Provide Data	Cooperative, but waiting until reseller decision made.

S-One Communications, Inc.	3	Will Not Provide Data	Cannot identify this company or services it provides.
Spa Net	3	Will Not Provide Data	Discovered on WISPA list but does not advertise wireless on website.
Spectrotel, Inc.	2	Will Not Provide Data	Reseller.
Speedus	4	Will Not Provide Data	Discovered on WISPA list. Nothing to do with BB service.
Stage 2 Networks	4	Will Not Provide Data	Voice and Hosted business phone
Sterling Telecom	2	Will Not Provide Data	Quote website: Wholesaler of Verizon Phone Service to Businesses.
Stratos Offshore Services Company	3	Will Not Provide Data	Provides communication services to US military and government entities outside of the country.
T2 Technologies	2	Will Not Provide Data	Reseller, may be business only. Not sure where/who they serve.
TCE Net	1	Will Not Provide Data	Company has 12 wireless customers, is not advertising to expand, will phase out these customers. Primarily serves dial up customers.
TCO Network, Inc.	2	Will Not Provide Data	Reseller, may be business only.
TCSweb Communications	4	Will Not Provide Data	Discovered on WISPA list. Website not active, no good Google results.
TDS Telecom	3	Will Not Provide Data	Provides data under 6 other subsidiaries
Tekmenwireless	3	Will Not Provide Data	Not a BB Provider
Telco Experts, LLC	2	Will Not Provide Data	Reseller
TelCove	3	Will Not Provide Data	Website redirects to Level 3.
Telcove	3	Will Not Provide Data	Website redirects to Level 3.
Telecom	2	Will Not Provide Data	From internet: dba Telecom and Verizon
Telefonica USA	3	Will Not Provide Data	Reseller, does not provide broadband.
Telekenex, Inc.	2	Will Not Provide Data	Business only reseller.
TelePacific	3	Will Not Provide Data	Reseller, no NY customers
Teleport Communications	3	Will Not Provide Data	Cannot identify company or services they provide.
Telergy Metro	3	Will Not Provide Data	Acquired by Con Ed communications, which was acquired by RNC.
Telesphere Networks Ltd.	4	Will Not Provide Data	Telephony services.
Telnes Broadband	2	Non-Responsive	Reseller, few NY customers, not willing to participate.
Telovations, Inc.	3	Will Not Provide Data	Reseller, no NY customers
TELZEQ Communications	4	Will Not Provide Data	Provides voice services and phone equipment
The Flat Planet Phone Company Inc.	4	Will Not Provide Data	Voice/telephony/ PBX
Thinking Phone Networks, LLC	4	Will Not Provide Data	Voice only.
TNCI	2	Will Not Provide Data	Business only reseller.
Towerstream	1	Will Not Provide Data	Opt out - business only. Too much work to participate.
Transbeam	2	Non-Responsive	Reseller
Tremcom International, Inc.	4	Will Not Provide Data	Voice services, long distance, etc.
TruCom Corporation	3	Will Not Provide Data	Cannot identify this company or the services it provides.
TTI National, Inc.	4	Will Not Provide Data	From Website: for state-to-state, in-state long distance, local toll (limited availability) and international calls to existing customers. In addition Toll-Free service and Calling Cards are also available.
UCN	4	Will Not Provide Data	Cannot identify this company or what services it provides.
Unison Communications, Inc.	2	Will Not Provide Data	Business only reseller. Quote: We interconnect with major carriers.
UNITED STATES CELLULAR CORPORATION	3	Will Not Provide Data	Not located in NY.
US LEC	3	Will Not Provide Data	Merged with PAETEC, was a "Will Provide" for previous rounds but no data provided
V-Global Communications	4	Will Not Provide Data	Voice only
Valstar, Inc.	3	Will Not Provide Data	Cannot identify this company or services it provides.
Vanco Direct	3	Will Not Provide Data	Cannot identify this company, aka Global Capacity Direct.
Velocity Networks Inc	2	Will Not Provide Data	Business only reseller.

Verio	3	Will Not Provide Data	Verio offer web hosting among other things, NTT is global reseller.
Verizon Avenue Corp.	3	Will Not Provide Data	no longer active.
Verizon Business Global LLC	3	Will Not Provide Data	Email indicates they cannot provide in 7-10 days
Verizon Network Integration Corp.	3	Will Not Provide Data	
Verizon New York	3	Will Not Provide Data	
Verizon Online	3	Will Not Provide Data	
Verizon Select Services, Inc.	3	Will Not Provide Data	formerly GTE Comm. Corp., focus on long-distance service.
Verizon Wireless	3	Will Not Provide Data	Provides data as Verizon Wireless
Verizon Wireless	4	Will Not Provide Data	Verizon Wireless services are now reported under Cellco Partnership dba Verizon Wireless.
Verizon Wireless	3	Will Not Provide Data	tower management company for Verizon Wireless
V-Global Communications	4	Will Not Provide Data	Voice and VoIP services.
VIA ONE TECHNOLOGIES INC.	4	Will Not Provide Data	Cannot identify this company or services they provide.
Vocal IP Network Ltd	4	Will Not Provide Data	Voice and telephony services only.
Voda Networks, Inc.	2	Will Not Provide Data	Reseller. Partnered with industry leading providers.
VoIPnet Technologies	4	Will Not Provide Data	Voice only.
VoIPStreet, Inc.	4	Will Not Provide Data	VoIP services only.
Vonage	4	Will Not Provide Data	Provides phone services only.
VPN Systems	3	Will Not Provide Data	Discovered on WISPA list. Does not provide BB service.
Warp Drive Products	3	Will Not Provide Data	Discovered on WISPA list. Does not provide BB service.
Wave2Wave Communications Inc	2	Will Not Provide Data	Company is a reseller, low priority, no outreach for R4
WavHost	3	Will Not Provide Data	Discovered on WISPA list. Webpage does not open, cannot get good search results on company.
WCS Wireless License Subsidiary, LLC	4	Will Not Provide Data	Cannot verify any information on company.
WDT	2	Will Not Provide Data	Reseller- unsure of service to NY.
White Fence	3	Will Not Provide Data	Company connects customers with broadband providers.
Wholesale Carrier Services, Inc.	2	Will Not Provide Data	Reseller- low priority for R4 outreach
WiiTel Communications, LLC.	3	Will Not Provide Data	Acquired by Level 3.
Winstar	3	Will Not Provide Data	Company was reseller but since has gone bankrupt.
Worldlink USA Inc.	4	Will Not Provide Data	Unsure of actual company- best search turns up maritime communications company.
Worldwide Marketing Solutions	4	Will Not Provide Data	Research indicates website hosting, many pending lawsuits and scam reports.
Xand Corporation	3	Will Not Provide Data	Network systems- not BB provider
XCHANGE TELECOM CORP.	4	Will Not Provide Data	Voice services only.
Xcyncroj	4	Will Not Provide Data	Cannot identify company Phone number is out of service
XO Communications Services, Inc. (Affiliated Entity)	2	Will Not Provide Data	Reseller
Zayo Group	3	Will Not Provide Data	Reseller, no NY customers
Zone Telecom, Inc.	4	Will Not Provide Data	Voice services, VoIP, etc.