

Appendix J

**Instructions For Completing the August 2002 Collocation Forecast Template
Template Designed for use in all 14 Verizon (former Bell Atlantic) Jurisdictions**

Introduction

The purpose of this collocation forecast document is to provide guidelines for the formats and language to be used in exchanges of collocation forecast information between CLECs and Verizon.

These guidelines in no way supersede any established or future Interconnection Agreements between Verizon and individual CLECs. These guidelines in no way supersede any regulatory orders, SGATs or tariff provisions related to collocation. These guidelines have been developed based on the successful New York collaborative effort for CLEC collocation forecasting.

Forecast Scope

On a semi-annual basis (quarterly where SGATs or specific contracts between Verizon and individual companies state quarterly forecasts as a requirement or where a significant change in demand occurs between forecast periods), CLECs will be requested to provide Verizon with a detailed forecast of their physical, scope, virtual, cageless, assembly-room, and remote terminal collocation requirements. This should include requirements for new arrangements, augments to existing arrangements, and changes from previously provided forecasts. This forecast should provide volume information on the following types of collocation arrangements, where available:

- Traditional Physical Collocation
- Assembly Room
- S.C.O.P.E.
- C.C.O.E. (cageless)
- Virtual Collocation
- CRTEE (Remote Terminal Collocation)

CLECs should strive to provide Verizon with a high degree of accuracy in the timing, location and sizing of collocation projects. Special attention should be paid to the information provided for Year 1, in accordance with forecasting a carrier's current business plan.

This workbook contains three tabs for each State/Year in Verizon South territory (former BA footprint). Please enter your forecast under the correct tab. For example, the 2002 forecast for New Jersey should be completed in the tab labeled "NJ 2002."

It is very important that you include the LATA at the Verizon Central Office CLLI location for each forecast that you are providing. The table at the end of this instruction will provide the valid LATAs for each state.

Please provide a completed collocation forecast to your Account Manager before August 16, 2002.

Collocation Forecast Template Individual Field Definitions
See Attachment #2 of Excel Spreadsheet

Header Section

1. Company Name:

DEFINITION: This field identifies the Telecommunications Carrier (CLEC) issuing the collocation forecast.

USAGE: Used by Verizon to identify individual carrier forecasts.

EXAMPLE: ABC Telecom

2. Company Contact Person:

DEFINITION: This field identifies the individual at the Telecommunications Carrier responsible to submit the forecast and act as a contact person for Verizon.

USAGE: This information will be used by Verizon to contact the CLEC if additional information concerning the forecast needs to be communicated.

EXAMPLE: Jane Doe

3. Company Contact Person Telephone Number:

DEFINITION: This field identifies the telephone number of the contact person.

USAGE: This information will be used by Verizon to contact the CLEC if additional information concerning the forecast needs to be communicated.

EXAMPLE: 201-555-1234

4. Verizon Account Manager:

DEFINITION: This field is used to identify the name of the Verizon Account Manager assigned to the Telecommunications Carrier providing the forecast.

USAGE: This information will be used by the CLEC and by Verizon to insure that the forecast is forwarded to the appropriate individual in Verizon.

EXAMPLE: John Doe

5. Date of This Forecast:

DEFINITION: This field is used to identify the date on which the current forecast is being submitted.

USAGE: This information will be used by Verizon to distinguish the current view from previously provided forecasted information.

EXAMPLE: August 09, 2002

6. Date of Previous Forecast:

DEFINITION: This field is used to identify the date of the CLEC's most recently provided forecast prior to the current submission.

USAGE: This information will be used by Verizon to identify Adds, Changes and Deletions to previously forecasted information.

EXAMPLE: January 17, 2002

Collocation Specific Section

7. Request Number:

DEFINITION: This field is used to numerically identify each individual request that appears on the forecast template.

USAGE: This information will be used by Verizon to identify and refer to individual forecast requests.

EXAMPLE: 1, 2, 3, etc.

8. LATA:

DEFINITION: This field identifies the LATA at the Verizon Central Office CLLI location for which the forecast is being made. (See LATA Table on pg 7 of this instruction for list of valid LATA's for each state)

USAGE: This information will be used by Verizon to sort and to aggregate demand forecast data by LATA.

EXAMPLE: 224

9. City/County:

DEFINITION: This field identifies the city or county for which the forecast is being made.

USAGE: This information will be used by Verizon to sort and to aggregate demand forecast data by city and/or county.

EXAMPLE: Newark

10. Central Office CLLI Code:

DEFINITION: This field identifies the eight - (8) character CLLI (Common Language Location Identifier) code of the specific central office for which the forecast is being made or the eleven - (11) character CLLI code of an existing arrangement for which an augment is being forecast. It may also be used to identify the eleven - (11) character CLLI code of the Central Office which the remote terminals subtends, if the specific remote terminals are not known at the time of this forecast.

USAGE: This information will be used by Verizon to sort and to aggregate demand forecast data by Verizon central office.

EXAMPLES: NWRKNJ02, NWRKNJ02DS2

11. Quantity:

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DEFINITION: This field identifies the quantity of offices the CLEC expects to apply for in a specific state, LATA, city or county when the CLEC has not yet determined the specific central offices where they will apply for collocation. If a specific CLLI code is supplied, this field will always be one (1).

USAGE: This information will be used by Verizon to aggregate demand by state, LATA, city/county when the CLEC is unsure of the exact offices that will be applied for.

EXAMPLE: 5

12. Application Month:

DEFINITION: This field identifies the month/year in which the CLEC plans to submit the application for collocation. The year that the application will be submitted is the forecast year shown at the top of the template, for example "Year #1 - 2001". A separate template is required for each forecast year.

USAGE: This information will be used by Verizon to sort and aggregate forecast demand data by application month

EXAMPLE: June-02

13. Requested In-Service Date:

DEFINITION: This field identifies the date which service is required. Requested In-Service date is based upon the appropriate provisioning intervals and/or tariff provisions in specific jurisdictions and is dependent on what type of collocation is being requested.

USAGE: This information will be used by Verizon to sort and aggregate demand forecast data by requested In-Service date. Note: "In Service" refers to the point in time when the collocation project is completed, turned over to the CLEC and capable of being put into service. For Year 2 & 3 an attempt should be made to provide as much detailed information as possible. General information will be accepted for planning purposes.

EXAMPLE: Aug-02

14. Type of Collocation (Physical, SCOPE, CCOE, Virtual, Assembly Room, CRTEE):

DEFINITION: This field identifies the type of collocation the CLEC plans to apply for.

USAGE: This information will be used by Verizon to plan collocation space.

EXAMPLE: Physical

15. Augment to Existing (Yes or No):

DEFINITION: This field identifies whether the CLEC will be requesting an augment to a existing collocation arrangement or is planning a new arrangement. Augments include expansions of existing cages, additional power requirements or additional cabling (DS1, DS3's, SVGAL etc.).

USAGE: This information will be used by Verizon to account for collocation requirements in planning collocation space, power plant growth, etc.

EXAMPLE: YES/NO (Please specify)

16. Type Augment:

DEFINITION: This field indicates the type of collocation augment being requested (Please specify).

- DS1
- DS3
- VG (Voice Grade)
- Lineshare
- Linesplit
- Fiber
- Power
- Addl. Space

USAGE: This information will be used by Verizon to identify and refer to the type of augment being requested. Additionally, it allows determination of proper intervals.

Note: Should be used when selecting augment (Yes in column 15), and in conjunction with In-Service Date (column 13) which is based upon the appropriate provisioning intervals and/or tariff provisions in specific jurisdictions and is dependent on what type of collocation is being requested.

EXAMPLE: Line Share

17. Floor Space in Sq. Ft. (Physical only):

DEFINITION: This field identifies the amount of square footage that will be requested for new physical collocation requests or expansion requests to existing arrangements. This field is not applicable when requesting virtual collocation.

USAGE: This information will be used by Verizon to plan collocation space.

EXAMPLE: 100

18. Type of Equipment (Virtual and CRTEE Collocation Only):

DEFINITION: This field identifies the high level description of the type of equipment the CLEC will request to have installed in the virtual and remote terminal collocation arrangements. This information may also be supplied for physical collocation requests, but is not mandatory.

USAGE: Verizon will use this information for the planning of virtual and remote terminal collocation space requirements.

EXAMPLE: OC48, SLC2000

19. Forecast Update Code:

DEFINITION: This field categorizes the entry based on previously forecasted information.

USAGE: Verizon will use this information to synchronize new forecast entries with previously provided forecasts and collocation applications.

EXAMPLE: For an "Add" not previously forecasted enter "A"
For a "Change" to a previous forecast enter "C"
For a "Delete" to a previous forecast enter "D"

20. Remarks

DEFINITION: This field is used to expand upon or clarify forecast data for each application.

USAGE: This field should be used to identify high priority requirements and other forecast details to be included in correspondence and discussions with Verizon.

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LATA TABLE

STATE	LATAs
Pennsylvania	226, 228, 230, 232, 234
New Jersey	220, 222, 224, 234
Delaware	228
Maryland	236, 238, 240, 242
West Virginia	240, 254, 256
District of Columbia	236
Virginia	236, 244, 246, 248, 250, 252

Pennsylvania Carrier to Carrier Statistical Methodologies:

The incumbent local exchange carrier (ILEC) may be required to use statistical methodologies as a means to determine if “parity” exists, or if the performance for competitive local exchange carriers (CLECs) is equivalent to the performance for the incumbent LEC. For performance measures where “parity” is the standard and sufficient sample size exists, the incumbent LEC will use the “modified t statistic” proposed by a number of CLECs in LCUG (Local Competitors User Group) for measured variables. For the evaluation of parity metrics involving counted variables, the permutation test, also known as Fisher’s exact test, will be used. The specific definitions and formulas are detailed below:

Definitions and Formulas:

Measured Variables are metrics of means or averages, such as mean time to repair, or average interval.

Counted Variables are metrics of proportions, such as percent measures.

\bar{X} denotes the average performance or mean of the sample

S denotes the standard deviation

n denotes the sample size

p denotes the proportion of failed performance, for percentages 10% translates to a 0.10 proportion

A statistical score below -1.645 is associated with a 5% percent or less chance that the performance for the CLEC will be incorrectly judged as being inferior to the ILEC performance, when, in fact, the performance for the CLEC is superior (Type I error). Note: For the purposes of the statistical evaluation of measured variable sample sizes of 30 or more, the standard normal Z distribution is used as reasonably approximating Student’s t distribution.

Counted Variables: The statistical score equivalent for counted variables is the standard normal Z score that has the same probability as the significance probability of the permutation test (a.k.a., Fisher’s exact test). Specifically, the statistical score equivalent refers to the inverse of the standard normal cumulative distribution associated with the following hypergeometric distribution probability of seeing the number of failures, or greater in the CLEC sample.

$$1 - \left\{ \sum_{i=\max(0, \{[n_{inc} p_{inc} + n_{clec} p_{clec}] + [n_{clec}] - [n_{inc} + n_{clec}]\})}^{n_{clec} p_{clec} - 1} \frac{\binom{[n_{clec} p_{clec} + n_{inc} p_{inc}]}{i} \binom{[n_{clec} + n_{inc}] - [n_{clec} p_{clec} + n_{inc} p_{inc}]}{n_{clec} - i}}{\binom{[n_{clec} + n_{inc}]}{n_{clec}}} \right\}$$

Measured Variables: The statistical score is the LCUG-t score

$$t = \frac{\bar{X}_{inc} - \bar{X}_{clec}}{\sqrt{S^2_{inc} \left(\frac{1}{n_{inc}} + \frac{1}{n_{clec}} \right)}}$$

Note: If the metric is one where a higher mean or higher percentage signifies better performance, the means (measured variables) in the numerator of the LCUG t formula should be reversed

Sample Size Requirements:

SMALL SAMPLE SIZE

The assumptions that underlie the statistical models used here include the requirement that the two groups of data are comparable. With larger sample sizes, differences in characteristics associated with individual customers are more likely to average out. With smaller sample sizes, there may be an issue regarding whether or not the characteristics of the sample reasonably represent the population. In order to permit meaningful statistical analysis to be performed and confident conclusions to be drawn, the sample size must be sufficiently large to minimize the violations of the assumptions underlying the statistical model. This involves not only statistical considerations, but also requires some practical judgement. The following will indicate the minimum sample sizes below which parity metrics results (for both counted and measured variables) may not permit reasonable statistical conclusions.

Statistical tests of parity should be performed under the following conditions:

If there are only 6 of one group (ILEC or CLEC), the other must be at least 30.

If there are only 7 of one, the other must be at least 18.

If there are only 8 of one, the other must be at least 14.

If there are only 9 of one, the other must be at least 12.

Any sample of at least 10 of one and at least 10 of the other is to be used for statistical evaluation.

A parity metric comparison that does not meet the above sample size criteria may be taken to the Carrier Working Group for further evaluation. However, the means (or proportions) and number of observations will be reported.

MEASURED VARIABLES WITH SAMPLE SIZE LESS THAN 30

If either the CLEC or ILEC sample size is less than 30 for a measured variable and if the sample sizes exceed the minimum sample sizes described above, then the following statistical evaluation procedure will be used:

If the absolute performance for the CLEC is better than the incumbent LEC's performance, no statistical analysis is required.

- a.) If the performance is worse for the CLEC than for the incumbent LEC, the incumbent LEC may use the LCUG t score until such time as a permutation test can be run in an automated fashion. Once the permutation test can be run in an automated fashion, it should be performed for all measured variable statistical tests having a sample size of less than 30.
- b.) If the LCUG t score indicates an "out of parity" result, the incumbent LEC will run the permutation test.
- c.) If the permutation test shows an "out of parity" condition, the incumbent LEC may perform a root cause analysis to determine cause, or may be required by the Carrier Working Group to perform a root cause analysis. If the cause is the result of "clustering" within the data, the incumbent LEC will provide such documentation. The nature of the variables used in the performance measures is that they do not meet the requirements 100% of the time for any statistical testing. Individual data points are not independent. The primary example of such non-independence is a cable failure. If a particular CLEC has fewer than 30 troubles and all are within the same cable failure with long duration, the performance will appear out of parity. However, for all troubles, including the incumbent LEC's troubles, within that individual event, the trouble duration is identical. Another example of clustering is if a CLEC has a small number of orders in a single location, with a facility problem. If this facility problem exists for all customers served by that cable and is longer than the average facility problem, the orders are not independent and clustering occurs. Finally, if root cause shows that the difference in performance is the result of CLEC behavior, the incumbent LEC will identify such behavior and work with the respective CLEC on corrective action.

Exceptions:

Another assumption underlying the statistical models used here is the assumption that the data is independent. In some instances, events included in the performance measures of provisioning and maintenance of telecommunication services are not independent. The lack of independence may be referred to as “clustering” of data. Clustering occurs when individual items (orders, troubles etc.) are clustered together as one single event. This being the case, the incumbent LEC will file an exception to the performance scores if the following events occur:

- a.) **Event Driven Clustering - - Cable Failure:** If a significant proportion (more than 30%) of a CLECs troubles are in a single cable failure, the incumbent LEC will provide the data demonstrating that all troubles within that failure, including the incumbent LEC’s troubles were resolved in an equivalent manner. Then, the incumbent LEC will provide the repair performance data with that cable failure performance excluded from the overall performance for both the CLEC and the incumbent LEC and the remaining troubles compared according to normal statistical methodologies.
- b.) **Location Driven Clustering - - Facility Problems:** If a significant proportion (more than 30%) of a CLECs missed installation orders and resulting delay days were due to an individual location with a significant facility problem, the incumbent LEC will provide the data demonstrating that the orders were “clustered” in a single facility shortfall. Then, the incumbent LEC will provide the provisioning performance with that data excluded. Additional location driven clustering may be demonstrated by disaggregating performance into smaller geographic areas.
- c.) **Time Driven Clustering - - Single Day Events:** If significant proportion (more than 30%) of CLEC activity, provisioning or maintenance, occur on a single day within a month, and that day represents an unusual amount of activity in a single day, the incumbent LEC will provide the data demonstrating that the activity is on that day. The incumbent LEC will compare that single day’s performance for the CLEC to incumbent LEC’s own performance. Then, the incumbent LEC will provide data with that day excluded from overall performance to demonstrate “parity”.
- d.) **CLEC Actions:** If performance for any measure is impacted by unusual CLEC behavior, the incumbent LEC will bring such behavior to the attention of the CLEC to attempt resolution. Examples of CLEC behavior impacting performance results include order quality, causing excessive missed appointments, incorrect dispatch identification, resulting in excessive multiple dispatch and repeat reports, inappropriate X coding on orders, where extended due dates are desired, and delays in rescheduling appointments, when the incumbent LEC has missed an appointment. If such action negatively impacts performance, the incumbent LEC will provide appropriate detail documentation of the events and communication to the individual CLEC and the Commission.

Documentation:

The incumbent LEC will provide all details, ensuring protection of customer proprietary information to the CLEC and Commission. Details include, individual trouble reports, and orders with analysis of the incumbent LEC’s and CLEC performance. For cable failures, the incumbent LEC will provide appropriate documentation detailing all other troubles associated with that cable failure.

**Flow Chart of Log Gamma Based Hypergeometric
 Routine for C2C Report
 Counted Variable Metric Comparisons**

