COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-1: Identify where in HAI 5.2a the Rastorization algorithms can be found, as described at page 34, footnote 36 of the Model Description.

Respondent:R. Mercer

RESPONSE: Rastorization is part of the process used by PNR Associates, Inc. (PNR) in the PNR clustering algorithm. Any software and/or inputs used to derive the clustering algorithm are the intellectual property of PNR. To the extent that the question is seeking software or documentation that is the intellectual property of PNR, AT&T is not able to provide such information, but states that such material is commercially available from PNR.

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VZ-ATT 1-2: The Model Description, Sections 5.3.6 and 5.3.7, describes HAI 5.2a's utilization of geocoding to assign customers to actual, physical locations. Appendix C, page 5, of the Model Description depicts the Geocode and Gross-up Process, which includes a count of unlocated customer locations in each census block. Provide the following information with respect to the above mentioned sections:

a. In Massachusetts, for density zones 1-9, identify the quantity of "unlocated" Verizon residential customer locations in each density zone and identify the percentage they represent of all Verizon residential locations in each density zone.

b. In Massachusetts, for density zones 1-9, identify the quantity of "unlocated" Verizon business customer locations in each density zone and identify the percentage they represent of all Verizon business locations in each density zone.

Respondent:R. Mercer

RESPONSE: The Model reports on a statewide basis and by density zone only the percentage of residential locations that are geocoded (See Distribution Module, LC Factors worksheet). It does not report business locations geocoded or the number of locations geocoded for either business or residence.

Following are the percentages of residential locations geocoded, by density zone:

MASSACHUSETTS DENSITY ZONES

0-5:	25.5%
5-100:	65.5%
100-200:	85.7%
200-650:	90.9%
650-850:	92.7%
850-2550:	93.6%
2550-5000:	90.2%
5000-10000:	84.1%
10000+:	79.9%
Average:	87.5%

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-3: Provide the percentage of all customer and business addresses that were successfully geocoded (i.e., assigned a longitude and latitude) in the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-4: Provide, in electronic format, a count of the number and percentage of business locations that were successfully geocoded to the point level for each Census Block Group ("CBG") in the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-5: Provide, in electronic format, a count of the number and percentage of residential locations that were successfully geocoded to the point level for each CBG in the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-6: State how the aspect ratio for a cluster reflect the geocoded "actual" locations of clusters (i.e., do the geocoded locations in HAI 5.2a resemble the clustered areas in HAI 5.2a).

Respondent:R. Mercer

RESPONSE: The geocoded locations fall within the clustered area.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-7: Describe in detail how HAI 5.2a accounts for households that have a United States Postal System match and a street network match, but do not have a six digit latitude and longitude match.

Respondent:R. Mercer

RESPONSE: If an address is located in the USPS files, and the address is also found in the street network files, Centrus Desktop determines a latitude and longitude for the location.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-8: Identify, by category, the number and percentage of how many residential, business, pay-phone and special access phone locations are actually geocoded in HAI 5.2a for the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-9: Provide the latitude and longitude, in electronic format, of each geocoded customer location and each customer located by the "surrogate" method for the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-10: Provide the geocode success rates for residence locations for each density zone in each Verizon wire center.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-11: Provide the geocode success rates for business locations for each density zone in each Verizon wire center.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-2.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-12: Identify the price that AT&T paid the owner of the raw geocode data for the use of that data for the State of Massachusetts.

Respondent:R. Mercer

RESPONSE: AT&T objects to this information request on the basis that it is irrelevant and not calculated to lead to the discovery of admissible evidence.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-13: In addition to the fee paid to the owner of the raw geocode data, did AT&T have to pay any other fees to create the input files?

Respondent:R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-12.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-14: If the answer to data request no. 13 is yes, identify to whom and by whom the fee payments were made, and the amount of the fee payments.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-13.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-15: State whether AT&T has provided any data to HAI, BVT or TVI for use in HAI 5.2a.

Respondent:R. Mercer

RESPONSE: AT&T does not believe it provided any data to any of the parties listed in this information request. AT&T did provide to HAI a study entitled, *"A Study of AT&T's Competitors' Capacity to Absorb Rapid Demand Growth,"* which is referenced in the HAI 5.2a-MA HIP as support for a number of inputs.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-16: If the answer to data request no. 15 is yes, provide the data and describe in detail how it was created and the manner in which it is used in HAI 5.2a.

Respondent:R. Mercer

RESPONSE: A copy of the study is attached.

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D.T.E. NO. 01-20

REQUEST:	Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.
DATE:	May 29, 2001
VZ-ATT 1-17:	State whether Verizon could use an alternative geocode data set to run HAI 5.2a. Also, identify any and all costs, fees, or expenses that would be associated with Verizon running alternative geocode data in HAI 5.2a.

Respondent:R. Mercer

RESPONSE: AT&T is unable to respond to this information request. AT&T does not know what Verizon-MA means by an "alternative geocode data set."

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-18: Describe in detail how the normalized customer location counts are used by HAI 5.2a, as referenced on page 25 of the Model Description.

Respondent:R. Mercer

RESPONSE: The explanation in Section 5.3 of the HAI 5.2a-MA Model Description provides a detailed description of how the normalized customer locations are used by the Model.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-19: Describe in detail how the process employed to normalize business line counts differs from the process employed to normalize residence line counts, as referenced on page 27 of the Model Description.

Respondent:R. Mercer

RESPONSE: The process to normalize business line counts is the same as the process to normalize residence line counts.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-20: State exactly what portions of HAI 5.2a's customer location database have been pre-processed and what portions are developed through running the model itself.

Respondent:R. Mercer

RESPONSE: The customer location database is produced by PNR.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-21: For the State of Massachusetts provide:

a. the number of addresses obtained through the Metromail, Inc. National Consumer Database;

b. the percentage of addresses to total households obtained through the Metromail, Inc., National Consumer Database; and,

c. the percentage of addresses that are P.O. Boxes and Rural Route Boxes.

Respondent:R. Mercer

RESPONSE:

a. The requested information is based on copyrighted Metromail, Inc., data, and is commercially available from Metromail.

b. See response to part "a".

c. The Model does not report percentage of addresses that are P.O. Boxes or Rural Route Boxes.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-22: If HAI 5.2a assumes there will be distribution plant supported on poles in the two highest density zones, identify where the costs associated with such poles are accounted for in the model.

Respondent:R. Mercer

RESPONSE: See Distribution Module, "calculations" worksheet, cell AS2.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-23: Provide, in electronic format, the geocoded data set for the State of Massachusetts used to produce the clusters in HAI 5.2a.

Respondent:R. Mercer

RESPONSE: To the extent that the question is seeking any software or documentation that is the intellectual property of PNR, AT&T is not able to provide such information, but states that such material is commercially available from PNR.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-24: Describe in detail and provide all documents concerning, referring or relating to the exact procedure used by HAI 5.2a to normalize line counts by census block to sum the Study Area wide data on total residential line counts as described at pages 25-26 of the Model Description. This description should state the basis for additions or reductions to specific census blocks that are made in order to perform the normalization of total line counts for the study area to the targets.

Respondent:R. Mercer

RESPONSE: The procedure for normalizing line counts is described in detail in Section 5 of the HAI5.2a-MAModel Description.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-25: Provide all documents concerning, referring or relating to the estimated total business count of 12 million that is used as the basis for the business adjustment referenced at page 27 of the Model Description.

Respondent:R. Mercer

RESPONSE: The requested information is based on copyrighted Dun and Bradstreet data. The information is commercially available from Dun & Bradstreet.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-26: Provide all software and inputs that constitute the PNR Associates, Inc. ("PNR") clustering algorithm.

Respondent:R. Mercer

RESPONSE: See response to VZ-ATT 1-23.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-27: Provide an electronic copy of the Dun & Bradstreet National Database along with all documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this database.

Respondent:R. Mercer

RESPONSE: The Dun & Bradstreet National Database is the intellectual property of Dun & Bradstreet and is commercially available from Dun & Bradstreet. AT&T has not undertaken a verification of the Dun & Bradstreet data. Dun & Bradstreet is well known and highly respected in the industry for the accuracy and value of its analysis and database programs.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-28: Provide an electronic copy of the Metromail, Inc. National Database along with all documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this database.

Respondent:R. Mercer

RESPONSE: The Metromail National Database is the intellectual property of Metromail and is commercially available from Metromail. AT&T has not undertaken a verification of the Metromail data. Metromail is well known and highly respected in the industry for the accuracy and value of its analysis and database programs.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-29: Provide an electronic copy of the CENTRUS Geocoding Software along with all documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this software.

Respondent:R. Mercer

RESPONSE: Centrus software is the intellectual property of Qualitative Marketing Software and is commercially available from Qualitative Marketing Software. AT&T has not undertaken a verification of the Qualitative Marketing Software data. Qualitative Marketing Software is well known and highly respected in the industry for the accuracy and value of its analysis and database programs.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-30: Provide an electronic copy of the Point-Coding reference data for CENTRUS point coding software along with all documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this software.

Respondent:R. Mercer

RESPONSE: AT&T does not understand this information request. PointCode™ is a Microsoft Access '97 database process (see Section 5.5 of the HAI 5.2a-MA Model Description). Centrus™ Desktop is a Qualitative Marketing Software product used by PNR to perform its geocoding (see Section 5.3.6 of the HAI 5.2a-MA Model Description).

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-31: Provide an electronic copy of the "Wire Center Mapinfo Mapping Boundaries" data along with all documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this data.

Respondent:R. Mercer

RESPONSE: Wire center boundaries are provided by Business Location Research ("BLR"). See Section 5.3.3 of the HAI 5.2a-MA Model Description. The data is the intellectual property BLR and is commercially available from BLR. AT&T has not undertaken a verification of the BLR data. BLR is well known and highly respected in the industry for the accuracy and value of its analysis and database programs.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-32: Provide an electronic copy of the National Access Line Model along with all inputs and documentation concerning, referring or relating thereto. Describe in detail the method by which AT&T verified the accuracy of this Model.

Respondent:R. Mercer

RESPONSE: The PNR National Access Line Model is the intellectual property of PNR and is commercially available from PNR. AT&T has relied on the fact that PNR is well known and highly respected in the industry for the accuracy and value of its analysis and database programs.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-33: Provide an electronic copy of all documents concerning, referring or relating to any and all external validation tests or studies that have been performed on HAI 5.2a.

Respondent:R. Mercer/J. Donovan

RESPONSE: To AT&T's knowledge, no credible, forward-looking cost studies that use publicly available data to calculate in one model the cost of unbundled network elements, universal service or interoffice transport, exist to which HAI 5.2a-MA can be compared. However, the Model has been validated by the fact that it is: (1) an open model; (2) relies on publicly available data; (3) is based upon solid engineering principles that are consistent with network architecture, configuration and principles embodied in Telcordia (Bellcore) documentation; and (4) has been subjected to an extreme degree of scrutiny by regulators, incumbent telephone companies and the developers of the Model itself.

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D.T.E. NO. 01-20

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VZ-ATT 1-34: With respect to the "changes in the default values" referenced at page 7 of the Model Description, provide a listing of the old and new values and a detailed explanation of the basis for each change. Identify all changes in the default input values from HAI Model, Release 5.0a to HAI 5.2a.

Respondent:R. Mercer/J. Donovan

RESPONSE: AT&T objects to this information request on the grounds that the information sought is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. The only version of the HAI Model relevant in this proceeding is HAI 5.2a-MA which was filed with Dr. Mercer's testimony. Subject to and without waiving this objection, AT&T states that if Verizon-MA wishes to examine other versions of the HAI Model, it can obtain all versions filed with the FCC from the International Transcription Service in Washington, D.C.

As noted in Dr. Mercer's testimony, the Model has benefited enormously from several years of scrutiny by regulators and by other, often hostile, parties, as well as by the continued review of the Model developers. Throughout this process of review and scrutiny, when presented with convincing support for an input value different from the existing default value, the developers of the Model have been willing to adopt the new value. In each case, the support upon which the "new" value is based has been added to the HAI HIP. Where a value differs between a previous version of the HAI Model and HAI 5.2a, the change was made because the support for the HAI 5.2a-MA value was considered by the Model's developers to be more current and based on more complete data than the value used in the previous version.

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VZ-ATT 1-35: Provide any and all contracts, memoranda, or any other documents exchanged between PNR and AT&T concerning the development of HAI 5.2a's (or any predecessor release) geocoding process or clustering algorithm.

Respondent:R. Mercer

RESPONSE: AT&T objects to the portion of this information request that asks for information regarding HAI Models other than HAI 5.2a-MA because this information is not relevant. Subject to and without waiving its objection, AT&T states that to the best of AT&T's knowledge, there were no such documents or messages exchanged between AT&T and PNR.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-36: The Distribution Module of HAI 5.2a references "Riser," "Intrabuilding," "Block," and "Building" cable.

a. Define each of these cable types;

b. identify each situation in which each cable type is used within the Distribution Module of HAI 5.2a;

c. provide the cable and structure cost for each cable type; and,

d. specify where each of the costs for each cable type can be found in HAI 5.2a. Include references to the particular location of the data (i.e., line number, row number, field, cell, etc.).

Respondent: R. Mercer/J. Donovan

RESPONSE:

a. Generally speaking, all four-cable types refer to distribution cable. Riser, Intrabuilding and Building cable exist inside the walls of a customer building. Block cable is normal distribution cable anchored to the outside wall of a building.

As stated in the HAI 5.2a-MA Model Description, Section 3.1.2.:

In urban areas, aerial distribution cable may also be attached directly to the outside of buildings, in what is called a "block cable" arrangement, or, in high-rise buildings, may consist of interior cable usually located in vertical "risers" that extend from floor to floor. The Model treats such riser cable and its associated costs as being part of the distribution network.

[1] *In a jurisdiction where riser costs are borne by building owners, the Model user can set the riser cable costs to zero so the Model will not include any costs for such cable.*

Section 6.2.1., footnote 42:

[42] *In the two highest density zones, aerial cable is assumed to consist of a user adjustable mix of intrabuilding riser cable, "block cable" attached to buildings, and cable strung from poles.*

b. As stated in the HAI 5.2a-MA Model Description, Section 6.3.1.

Main clusters with total areas less than 0.03 square miles and line densities greater than 30,000 lines per square mile are assumed to consist of high-rise buildings and accorded special treatment appropriate for such buildings. This high-rise test identifies cases in which a serving area is very small, but its line density is so high as to be incompatible with any explanation other than vertical "stacking" of the customer locations. In such cases, the Model assumes the distribution cable required to serve the main cluster consists of riser cable inside the high rise building, and that the SAI required for service is located in the basement of such a building. The number of floors in the high rise buildings is estimated by dividing the occupied building space by the area of the main cluster, reduced to account for streets and sidewalks.

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[1] To the extent that **riser cable** is separately tariffed or otherwise excluded from the loop UNE, the per-foot cost of **riser cable** can be set to $0.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-37: The Copper Feeder Manhole Spacing table in Section 3.1.2 of the Inputs Portfolio identifies distances between manholes as 400 feet, 600 feet or 800 feet for various density zones.

a. Identify the default distance between manholes for each density zone;

b. provide all documents or workpapers concerning, referring or relating to the development of the default distance between manholes; and,

c. to the extent no documents or workpapers were used in the development of the default distance between manholes, provide the rationale for selecting the default distance between manholes for each density zone.

Respondent: R. Mercer/J. Donovan

RESPONSE: a. The default distance between manholes for each density zone is as indicated in Section 3.1.2. of the Inputs Portfolio as follows:

Default Values:

Copper Feeder Manhole Spacing, feet	
Density Zone	Distance between manholes, ft.

0-5	800
5-100	800
100-200	800
200-650	800
650-850	600
850-2,550	600
2,550-5,000	600
5,000-10,000	400
10,000+	400

b. There are unquestionably many unidentifiable documents pertaining to manhole spacing that may have been reviewed by members of the engineering team over each person's 20 to 30+ years of experience in telecommunications. However, as discussed in response to information request number VZ-ATT 1-37c below, the recommended distances by density zone were based on expert opinion, not documentation.

c. The recommended distances between manholes for use in the HAI 5.2a-MA Model were based on the expert judgment of a team of expert outside plant engineers.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-38: Provide the most current AT&T engineering guidelines (electronic and hard copy) and any other documents used by AT&T personnel to engineer AT&T's local loop and/or outside plant network.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's own operational experience to date is not relevant to that issue.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-39: Provide the most current AT&T engineering guidelines (electronic and hard copy) and any other documents used by AT&T personnel to engineer AT&T's long distance network.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-38.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-40: Produce all engineering guidelines (e.g., local loop design, local switch, and tandem switch guidelines) concerning, supporting, or relating to HAI 5.2a's engineering assumptions.

Respondent: R. Mercer/J. Donovan

RESPONSE: Engineering assumptions relating to HAI 5.2a-MA are described in detail in the HAI Model Description and HAI 5.2a-MA Inputs Portfolio (HAI 5.2a-MA HIP), and the HAI 5.2a-MA Model itself.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-41: Describe in detail how Rights of Way ("ROW") costs, including capitalized site acquisition costs (i.e., payments for easement, lease, purchase) and engineering costs, are accounted for by HAI 5.2a.

Respondent: R. Mercer/J. Donovan

RESPONSE: ROW costs are not separately broken out in HAI 5.2a-MA. It has traditionally been the policy of ILECs, including Verizon, to avoid paying for ROW, such as capitalized site acquisition costs (i.e., payments for easement, lease, purchase) paid to landowners. The HAI 5.2a-MA Model follows that guideline also. Examples include standard easement language incorporated into residential housing tracts, such as the granting of utility rights of way for five feet on each side of a property line; other examples include the ability of utilities to place facilities on public rights of way along roads and highways. Filing of appropriate documentation is normally performed by members of the outside plant engineering organization.

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VZ-ATT 1-42: Provide all documents concerning, referring or relating to the ROW costs calculated by HAI 5.2a for the State of Massachusetts.

Respondent: R. Mercer/J. Donovan

RESPONSE: See response to VZ-ATT 1-41.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-43: Identify the specific ROW costs (in dollars) assumed for large Digital Loop Carriers ("DLCs") and identify where in HAI 5.2a (i.e., specific fields or cells) these costs can be found.

Respondent: R. Mercer/J. Donovan

RESPONSE: See response to VZ-ATT 1-41.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-44: Identify the specific ROW costs (in dollars) assumed for small DLCs and identify where in HAI 5.2a (i.e., specific fields or cells) these costs can be found.

Respondent: R. Mercer/J. Donovan

RESPONSE: See response to VZ-ATT 1-41.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-45: Describe and provide all documents concerning, referring or relating to how the costs associated with records mechanization are accounted for in HAI 5.2a.

Respondent: R. Mercer/J. Donovan

RESPONSE: Records mechanization has been an ongoing Operations Support System ("OSS") cost for many ILECs since 1978, and are included within the overall costs per line in AT&T's filing. There is no specific granular breakout for this cost.

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VZ-ATT 1-46: Provide a copy of all local loop transmission and design practices followed in HAI 5.2a.

Respondent: R. Mercer/J. Donovan

RESPONSE: See response to VZ-ATT 1-40.

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VZ-ATT 1-47: Provide a separate itemized listing of the material and installation costs for each item that is included in HAI 5.2a, input item B66 found on page 38 of Appendix B to the Model Description.

Respondent: R. Mercer/J. Donovan

RESPONSE: A separate itemized listing of the material and installation costs for each item that is included in HAI 5.2a-MA, input item B66, DLC Initial Common Equipment Investment is provided within the HM 5.2a-MA HIP, Section 3.5.4. Additional details regarding DLC costs, including specific material and installation cost breakdowns, is contained in the Direct Testimony of Mr. John C. Donovan.

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VZ-ATT 1-48: Provide a separate itemized listing of the material and installation costs for each item that is included in HAI 5.2a, input item B66 found on page 38 of Appendix B to the Model Description.

a. an incumbent local exchange carrier ("ILEC");

b. an interexchange carrier;

c. a competitive local exchange carrier ("CLEC"); and

d. a CLEC's operators.

Respondent: R. Mercer/J. Donovan

RESPONSE: AT&T possesses no documents or workpapers responsive to this request.

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VZ-ATT 1-49: Section 7 of the Inputs Portfolio lists the source of the "Regional Labor Adjustment Factor" table on page 158 as "Martin D. Kiley and Marques Allyn, eds., *1997 National Construction Estimator 45th Edition*, pp. 12-15. [Normalized for New York State as 1.00]." Provide the following information:

a. all documents and assumptions (electronic and hard copy) concerning, referring or relating to the logic and/or methodology used to convert the city-specific labor rates contained in the *National Construction Estimator* to the State estimates contained in the "Regional Labor Adjustment Factor" table (See Section 7, page 158 of the Inputs Portfolio);

b. all calculations that are required to map the referenced *National Construction Estimator* values to the values noted in the "Regional Labor Adjustment Factor" table referenced in subsection a above;

c. describe in detail how the HAI 5.2a uses the Area Modification Factors on pages 12-15 of the *1997 National Construction Estimator 45th Edition*; and

d. provide any and all calculations, comparisons, and derivations that utilize the data in the *1997 National Construction Estimator 45th Edition.*

Respondent: R. Mercer/J. Donovan

RESPONSE: The Regional Labor Adjustment Factor was not utilized in the run of the HAI 5.2a-MA filed in this proceeding. The factor is provided as an optional user tool for a user who might want to test the effect of variations in labor rates in different parts of the country. The default value of 1.00 was used in the model filed in this proceeding.

The *National Construction Estimator* industry reference book was mentioned only as one potential source for a Regional Labor Adjustment Factor.

a. The *National Construction Estimator* industry reference book does not provide city-specific labor rates. The *National Construction Estimator* provides Area Modification Factors for Material, Labor, Equipment, and a Total Weighted Average. Potential Labor Adjustment Factors indicated in the HAI 5.2a-MA Inputs Portfolio upon mentioning the *National Construction Estimator* were based on the state-wide Area Modification Factors listed in that reference. AT&T and its consultants did not derive the state-wide factors, they were shown in the reference book, and were normalized using New York as a base of 1.00.

b. Although not used in the filing made before this Department, the potential Labor Adjustment Factors indicated in the HAI 5.2a-MA Inputs Portfolio were normalized such that New York would be 1.00 by taking the state-wide Area Modification Factors listed in the National Construction Estimator for Labor, adding 100% to the value listed, and dividing by 118% (which was the New York value after adding 100% to the value shown in the *National Construction Estimator*).

c. As mentioned in the introductory paragraph of this response, the HAI 5.2a-MA Model is not affected by the Labor Adjustment Factor as the Model has been filed in this proceeding. The potential use of this factor and the detailed calculations associated with that factor are discussed in detail in Section 7 of the HAI 5.2a-MA HIP.

d. AT&T objects to this request as vague and because it does not apply to HAI 5.2a-MA as filed in this proceeding, since the Labor Adjustment Factor was left at its default value of 1.00. Subject to and without waiving this objection, AT&T states that it is not aware of any calculations, comparisons,

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VZ-ATT 1-50: State whether the labor rates used in HAI 5.2a reflect Beginning Year, Mid Year, or Year End data.

Respondent: R. Mercer/J. Donovan

RESPONSE: Labor rates used in HAI 5.2a-MA reflect average Construction labor rates, or average Installation & Repair labor rates, as appropriate. No special calculations were performed relating to "Beginning Year," "Mid Year," or "Year End," as hypothesized in the question.

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VZ-ATT 1-51: Identify each and every default input value in HAI 5.2a that was modified as a result of additional surveys of contractors and suppliers to ILECs.

Respondent: R. Mercer/J. Donovan

RESPONSE: AT&T objects to this information request on the basis that it is vague, ambiguous and overbroad. AT&T is unclear what Verizon-MA means by the term "additional surveys." Additionally, the term "modified" may be read to imply any change to any default input value originally used in any version of the HAI Model. Subject to and without waiving its objections, AT&T refers to the response to VZ-ATT 1-34 for a discussion of how the ongoing scrutiny of the HAI Model has led to changes in input values.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-52: Provide all documents concerning, referring, or relating to any analysis(es) conducted by AT&T of Verizon's existing network in the State of Massachusetts.

Respondent: R. Mercer/J. Donovan

RESPONSE: ARMIS data available at the FCC's website was used to determine the structure types used by Verizon's existing network in Massachusetts. Use of that data, and appropriate calculations of percentages can be seen in Mr. Donovan's Direct Testimony.

Other data specific to Massachusetts include central office locations as reported in the LERG, soil texture and rock type and depth information from the USGS data included in PNR inputs to the model, customer location data as included in PNR inputs to the model, road networks, and central office boundaries.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-53: Provide all documents that were reviewed, prepared, or relied upon by AT&T to establish an opinion, contention, or criticism of the network technology currently deployed by Verizon in the State of Massachusetts.

Respondent: R. Mercer/J. Donovan

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad and unduly burdensome. AT&T has, over a period of years, reviewed hundreds of documents regarding local exchange networks in many states, including in all likelihood local networks in Massachusetts. Any of those documents could have contributed to the reader forming an opinion about local networks, some may even have contributed to the reader forming a critical opinion of such networks. It would be impossible to provide, or even to list, all such documents reviewed that might have been relied upon, either in a positive or negative sense, in forming an opinion about the network technology currently deployed in any local exchange network, much less those that specifically addressed local networks in Massachusetts. To the best of our knowledge, AT&T has not prepared any studies that are critical of Verizon-MA's network technology other than those filed in this proceeding that may include critical observations about currently deployed technology.

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D.T.E. NO. 01-20

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VZ-ATT 1-54: Identify by year and customer class (residence or business) the number of customers in Verizon's Massachusetts service area that AT&T has provided with basic exchange service for each year since 1996.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant, not reasonably calculated to lead to the discovery of admissible evidence and requests data that is proprietary and competitively sensitive. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's efforts to provide basic exchange service is not relevant to that issue.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-55: Provide all documents concerning, referring or relating to any analysis performed by AT&T since 1996 to determine whether it should enter Verizon's Massachusetts service area for the purpose of providing basic exchange service.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's efforts to provide basic exchange service is not relevant to that issue.

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VZ-ATT 1-56: Provide the rationale for using an Annual to Daily Usage reduction factor of 270 days referenced on page 91, Section 4.3.13 of the Inputs Portfolio rather than the factor of 264 days that appears in the AT&T Capacity Cost Study.

Respondent: R. Mercer

RESPONSE: The 270 value was based on the judgment of HAI in consultation with other experts in the telecommunications industry. Section 4.3.13 of the HAI 5.2a-MA HIP references the 1990 AT&T Capacity Cost Study not as the basis of the recommended value, but to show that the estimate used in HAI 5.2a-MA is closely aligned (within 2%) with estimates used in other studies.

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VZ-ATT 1-57: Identify who owns HAI 5.2a and describe in detail the scope and extent of each owner's rights to the model.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the basis that it is irrelevant and not calculated to lead to the discovery of admissible evidence.

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VZ-ATT 1-58: Is AT&T free to release or sell HAI 5.2a to other companies for use outside of this or any other regulatory proceeding?

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the basis that it is irrelevant and not calculated to lead to the discovery of admissible evidence.

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VZ-ATT 1-59: If the answer to data request no. 58 is yes, identify the terms under which HAI 5.2a may be released.

Respondent: R. Mercer

RESPONSE: See response to VZ-ATT 1-58.

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VZ-ATT 1-60: To the extent that the release of HAI 5.2a is restricted, state the basis for the restriction. Also, produce any and all documents concerning, referring or relating to any restrictions on the release of HAI 5.2a.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the basis that it is irrelevant and not calculated to lead to the discovery of admissible evidence.

Subject to and without waiving its objection, AT&T states that is does not understand what Verizon-MA means by the term "restricted." The HAI 5.2a-MA introduced in this proceeding is an open model. The Model's methodology is described in detail in the HAI 5.2a-MA Model Description, its default inputs are described and supported in the HAI 5.2a-MA Inputs Portfolio (HAI 5.2a-MA HIP), and the Model's calculations, formula, and other output are open for review and analysis by all users. Users have the capability to change input values and even to change formula and calculations in the Model, although if formula or calculations were changed, the Model would no longer be the HAI 5.2a-MA Model and could not be referred to as such.

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VZ-ATT 1-61: Identify the company that arranged to have PNR provide the customer location data and develop the customer location input files for HAI 5.2a.

Respondent: R. Mercer

RESPONSE: AT&T.

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VZ-ATT 1-62: Explain, in detail, how HAI 5.2a assigns customer locations to a particular wire center.

Respondent: R. Mercer

RESPONSE: Customers are assigned to wire centers based on wire center boundaries and the longitude and latitude of the customers. For a further explanation, see Section 5.3.3 of the HAI 5.2a-MA Model Description.

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VZ-ATT 1-63: Provide all documents including, but not limited to, electronic files, databases and workpapers, exchanged between AT&T, HAI, TVI or BVT and PNR concerning, referring or relating to the PNR customer location data used or considered for use in HAI 5.2a.

Respondent: R. Mercer/ J. Donovan

RESPONSE: AT&T is not aware of any such exchanges between HAI, BVT, or TVI and PNR. Regarding any such exchanges between AT&T and PNR, see response to VZ-ATT 1-35.

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VZ-ATT 1-64: Provide any and all documents including, but not limited to, electronic files, databases and workpapers, exchanged between HAI, TVI or BVT and AT&T concerning, referring or relating to the PNR customer location data used or considered for use in HAI 5.2a.

Respondent: R. Mercer/ J. Donovan

RESPONSE: See response to VZ-ATT 1-64.

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VZ-ATT 1-65: Identify in detail how the HAI 5.2a differs from the HAI Model Release 5.2 that was filed by AT&T with the New York State Public Utility Commission. The response should identify, but not necessarily be limited to, all:

a. differences in modeling assumptions;

b. differences in input assumptions;

c. differences in default input assumptions;

d. differences in technology assumptions; and,

e. differences in platform algorithms.

Also, for each difference identified above, explain the basis for the difference.

Respondent: R. Mercer

RESPONSE: AT&T objects to this request on the grounds that the information sought is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. The cost model sponsored by AT&T in New York is not at issue in this proceeding. In addition, because of the use of different modeling and network assumptions, a comparison of the models would be highly burdensome. Subject to and without waiving these objections, AT&T states that the cost model sponsored by AT&T in New York is publicly available in the record of the New York proceeding for Verizon-MA to obtain and review as it wishes. AT&T also notes that Verizon-MA's New York affiliate is a participant in the New York proceeding, and undoubtedly has reviewed the cost model sponsored by AT&T in that proceeding.

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VZ-ATT 1-66: Does the HAI 5.2a differ from the HAI Model Release 5.2a that was filed by AT&T with the New Jersey Board of Public Utilities? If so, please identify any and all differences. The response should identify, but not necessarily be limited to, all:

a. differences in modeling assumptions;

b. differences in input assumptions;

c. differences and supporting justification for changes in default input assumptions;

d. differences in technology assumptions; and,

e. differences in platform algorithms.

Respondent: R. Mercer

RESPONSE: See objection in response to information request VZ-ATT 1-65.

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VZ-ATT 1-67: On page 8, lines 5-6, of his Direct testimony, Dr. Mercer states that HAI 5.2 "neither is nor should it be a tool for designing a physical telecommunications network." Is it Dr. Mercer's position that TELRIC costs should not be based on the design of an actual physical telecommunications network? Please explain in detail.

Respondent: R. Mercer

RESPONSE: It is Dr. Mercer's position that ". . . HAI 5.2a-MA is a highly sophisticated costing tool capable of calculating the TELRIC costs of UNEs in Massachusetts." It ". . . is not a tool for designing a physical telecommunications network."

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VZ-ATT 1-68: Identify any and all of the default values in the HAI 5.2a that have been changed from the Hatfield Model, Release 2.2.2 previously submitted by AT&T in Massachusetts. For each default value:

a. specifically explain the nature of each change;

b. set forth in detail the reasons for each change;

c. identify the person or persons responsible for determining each change;

d. provide copies of all documents that were considered in connection with each change or in any way discusses each change; and

e. provide a summary of communications regarding the decision to make each change.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. HM 2.2.2 is not at issue in this proceeding. Nonetheless, because HM 2.2.2 was submitted to this Department in the 1996 *Consolidated Arbitration* docket, and subject to and without waiving its objections to this information request, AT&T states as follows:

a. The differences between HM 2.2.2 and HAI 5.2a-MA are so fundamental that a direct comparison of the inputs would be meaningless. Requiring AT&T to perform such a comparison would be both unreasonable and unduly burdensome. Attached hereto is a paper copy of a Hatfield Model Version 2.2.2 Inputs Summary; to the best of AT&T's knowledge, no electronic copy of this document still exists. Using the attached Summary and either the HAI 5.2 Inputs Portfolio ("HAI 5.2a-MA HIP"), or Appendix B of the HAI 5.2a-MA Model Description, Verizon-MA can compare the input values in the two versions of the Model.

b. See response to VZ-ATT 1-34.

c. No one person, or group of persons, was assigned the responsibility for changing a particular default input value. Such decisions were the result of innumerable conversations over a number of years, both in person and by telephone, by HAI and BroadView Telecommunications ("BVT") with a great number of persons both within the AT&T and MCI organizations, and independent outside sources. The best source of support for any default value in the HAI Model can be found in the HAI Inputs Portfolio ("HAI HIP"), which describes not only the support but also the justification for each default input value used in that version.

Again, without waiving its objections to this information request, AT&T states that the following individuals have played significant roles in the overall development of HAI Model inputs:

Dr. Robert A. Mercer, BroadView Telecommunications, LLC

Richard A. Chandler, HAI
Dr. A. Daniel Kelley, HAI
Michael R. Lieberman, AT&T
Dr. Mark T. Bryant, MCI

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VZ-ATT 1-69: Describe in detail any and all sampling or analysis that was undertaken to verify that the Business and Residence location and line count data as modeled in HAI 5.2a is consistent with actual Massachusetts demographics.

Respondent: R. Mercer

RESPONSE: AT&T has not undertaken a verification of business and residence location and line count data. AT&T has relied on the fact that the business and residence location and line counts data used in HAI 5.2a-MA is produced by PNR Associates. See response to VZ-ATT 1-32.

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VZ-ATT 1-70: Provide all documents concerning, referring or relating to the engineering, furnishing, and installation of AT&T's most recent digital switch.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's own operational experience to date is not relevant to that issue.

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VZ-ATT 1-71: Identify any and all expenses concerning, referring or relating to the installation of AT&T's most recent digital switch, including riggers, transportation, and heavy equipment as well as all installation labor costs. Provide the total cost information and the number of lines and the number of trunks the switch was initially equipped for and identify how many of those lines and how many of those trunks were actually placed in service at the time the switch was initially placed in service.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

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VZ-ATT 1-72: Provide all documents concerning, referring or relating to the engineering, furnishing, and installation of AT&T's most recent digital tandem switch.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-73: Identify any and all expenses concerning, referring or relating to the installation of AT&T's most recent tandem switch, including riggers, transportation, and heavy equipment as well as all installation labor costs. Provide the total cost information on and the number of lines and the number of trunks the switch was initially equipped for and identify how many of those lines and how many of those trunks were actually placed in service at the time the switch was initially placed in service.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-74: Provide all documents concerning, referring or relating to the engineering, furnishing, and installation of AT&T's most recent Signal Transfer Point ("STP").

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

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DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-75: Identify any and all expenses concerning, referring or relating to the installation of AT&T's most recent STP, including riggers, transportation, and heavy equipment as well as all installation labor costs.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-76: Provide all documents concerning, referring or relating to the engineering, furnishing, and installation of AT&T's most recent Signal Control Point ("SCP").

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-77: Identify any and all expenses concerning, referring or relating to the installation of AT&T's most recent SCP, including riggers, transportation, and heavy equipment as well as all installation labor costs.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-78: Provide any and all documents concerning, referring or relating to the engineering, furnishing, and installation of AT&T's most recently constructed power plant including the addition of rectifiers, batteries, fuse distribution bays, automatic breakers, microprocessor, and the standby emergency generator.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-79: Identify any and all expenses concerning, referring or relating to the installation of AT&T's most recently constructed power plants, including riggers, transportation, and heavy equipment as well as all installation labor costs.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-70.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-80: Provide copies of any and all documents concerning, supporting, referring or relating to the development of the default input values used in the HAI 5.2a, including but not limited to all documents previously produced by AT&T in regulatory proceedings in the States of New York, New Jersey, Pennsylvania, California and Vermont.

Respondent: R. Mercer/ J. Donovan

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad and unduly burdensome. Subject to and without waiving these objections, AT&T states that no written documentation was relied upon by members of the engineering team to develop the input values to the HAI 5.2a-MA Model for which they were responsible, other than those pertaining to the adoption of FCC input values. All FCC input value information is available publicly from the FCC, and the FCC's web site, which contains explanations for FCC input values:

http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/index13.htm

See also the FCC Synthesis Model input values at

http://www.fcc.gov/Bureaus/Common_Carrier/Orders/1999/f99304a1.xls

Also, as stated in the Overview of the HAI 5.2a-MA HIP:

Prices of telecommunications equipment and materials are notoriously difficult to obtain from manufacturers and large sales organizations. Although salespeople will occasionally provide "ballpark" prices, they will do so only informally and with the caveat that they may not be quoted and the company's identity must be concealed. It is very nearly impossible to obtain written, and hence "citable," price quotations, even for "list" prices, from vendors of equipment, cable and wire, and other items that are used in the telecommunications infrastructure. Part of the reason for this is that the vendors have long-standing relationships with the principal users of such equipment, the incumbent local exchange carriers ("ILECs"), and they apparently believe that public disclosure of any prices, list or discounted, might jeopardize these relationships. Further, they may fear retaliation by the ILECs if they were to provide pricing explicitly for use in cost models such as HM5.2a. The HM5.2a developers thus have often been forced to rely on informal discussions with vendor representatives and personal experience in purchasing or recommending such equipment and materials. Nevertheless, a great deal of experience and expertise in the industry underlies the estimates, where they were necessary to augment explicit, publicly-available information. Some of the public information, typically information filed with the Federal Communications Commission or another regulatory body, has supplemented the knowledge of the experts who have contributed to this document.

In addition, each member of the engineering team utilized a number of methods

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-81: Explain in detail how HAI 5.2a performs a dynamic life cycle cost comparison to determine what type of feeder technology should be employed.

Respondent: R. Mercer

RESPONSE: First, the number of feeder facilities (lines) at a Serving Area Interface ("SAI") are determined. If the feeder distance between the central office, and the SAI, utilizing right-angle routing, is greater than the Copper Feeder Maximum Distance (Default = 9,000 feet), then fiber fed Digital Loop Carrier ("DLC") will be utilized.

If the feeder distance is equal to or less than the Copper Feeder Maximum Distance (Default = 9,000 feet), then the model performs a life cycle analysis to determine whether the annual capital carrying charges for a fiber fed DLC solution, including maintenance factors, are less than or equal to the annual capital carrying charges for a copper feeder solution, including maintenance factors. The annual capital carrying charges are determined as follows:

Annual capital carrying charges for a fiber fed DLC solution:

The number of feeder facilities (lines) at the SAI are upsized utilizing the Remote Terminal Fill Factor (Default = 0.90).

The next larger DLC terminal size or sizes are selected by the model, and designated as High Density or Low Density DLC.

The installed cost of a DLC facility is determined as follows:

- Line card investment is determined by dividing the upsized line requirement by the Lines per Channel Unit for the High Density or Low Density DLC (e.g., Default = POTS ÷ 4 for High Density), and multiplied by the cost per line card (e.g., Default = $310 per line card for High Density DLC).

- Site Costs (e.g., Default = $3,000.00 for High Density DLC) is selected.

- Remote Terminal Initial Common Equipment Investment (e.g., Default = $66,000.00 for High Density DLC) is selected.

- Optical Patch Panel investment (e.g., Default = $1,000.00 for High Density or Low Density DLC) is selected.

- If more than one increment of DLC is necessary to meet the DLC Remote site requirement (e.g., an additional 672-line Large DLC Common Equipment Investment per Additional Line Increment

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-82: Explain in detail how HAI 5.2 "locates" customers who are not identified through the geocoding process. Provide any and all documents concerning, referring or relating to the process of locating such customers.

Respondent: R. Mercer

RESPONSE: The requested explanation is provided in Section 5.3.7 of the HAI 5.2a-MA Model Description and pages 39-40 of Dr. Mercer's testimony.

To the extent that the question is seeking any software or documentation that is the intellectual property of PNR, see response to VZ-ATT 1-23.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-83: Provide the "clustering algorithm" that is used to determine groupings of customers and explain how this algorithm is utilized in HAI 5.2a and all previous versions of the Hatfield Model Release. Provide all documents concerning, supporting, referring or relating to this algorithm.

Respondent: R. Mercer

RESPONSE: The clustering algorithm process is described in Section 5.4.2 of the HAI 5.2a-MA Model Description.

To the extent that the question is seeking any software or documentation that is the intellectual property of PNR, see response to VZ-ATT 1-23.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-84: Describe in detail the calculation of the "life-cycle maintenance and capital carrying costs of the different structure types" that is performed by HAI 5.2a in analyzing placement costs of buried and aerial structure. Provide all documents concerning, referring or relating to this calculation.

Respondent: R. Mercer/ J. Donovan

RESPONSE: First, the model determines the amount of cable investment required for Distribution Cable, Copper Feeder Cable, or Fiber Feeder Cable.

Next, the model determines the annual capital carrying charges, including maintenance, for the aerial and buried portions of cable, utilizing the default Structure Fractions for the cable involved.

The model then determines the composite investment for aerial structure and buried structure, with appropriate normal, soft rock, hard rock, and surface texture multipliers applied, and multiplies that amount by the appropriate Structure Percent Assigned to Telephone Company. Annual capital carrying charges, including maintenance, for the aerial and buried structures are determined, and added to the annual carrying charges, including maintenance, for the aerial and buried cable.

A comparison is made between the annual cost of buried cable and aerial cable. If the cost of aerial cable (with its attendant higher maintenance costs, different depreciation costs, and structure assigned to telco) is significantly less than the cost of buried cable, then the model will consider a partial, gradual shifting of some buried cable structure to aerial cable structure.

Although the model has the capability of shifting structure between buried and aerial on purely economic reasons, two moderating factors have been built into the model.

The first moderating factor is a user input titled, "Buried Fraction Available for Shift." The recommended default value is 0.75 (75%). Although this value could be set by the user at 100% available for shift, this allows moderation to account for local requirements for out of sight plant, local regulations, and other local conditions that would likely favor out of sight plant for other than purely economic reasons that have been cared for in the model (i.e., depreciation rate differences, structure sharing differences, and maintenance differences).

The second moderating factor is implemented by the use of a "Logistics Choice Curve." This classic application of choice prerogatives is used to temper a rapid shift from buried to aerial structure based simply on a $0.01 difference in annual costs, for example. Thus, the greater the difference in cost, the more likely a shift from buried to aerial plant will occur. The HAI 5.2a-MA HIP has additional information regarding the use of the Logistic Choice Curve and other aspects of this category. Relevant excerpts are as follows:

HM5.2a uses a "Logistic Choice Curve" to

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-85: Describe in detail the calculations performed by HAI 5.2a to define the set of interoffice SONET rings that connect host, stand-alone and tandem switches to each other. Provide any and all documents concerning, referring or relating to these calculations.

Respondent: R. Mercer

RESPONSE: Appendix D of the HAI 5.2a-MA Model Description describes in detail the process used to determine SONET rings that connect host, stand-alone and tandem switches. Calculations can be found in the "master.xls" file, Module 1.

To the extent that the question is seeking any software or documentation that is the intellectual property of PNR, see response to VZ-ATT 1-23.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-86: Explain how HAI 5.2a calculates the investment required for the redundant paths and associated transmission terminal equipment for the point-to-point rings that connect small offices to the tandem switches. Provide any and all documents concerning, referring or relating to that calculation.

Respondent: R. Mercer

RESPONSE: Section 6.5.3 of the HAI 5.2a-MA Model Description explains the process of calculating interoffice ring investment in detail. The actual calculations can be found in the Switching I/O Module, wire center investment and tandem and STP worksheets.

To the extent that the question is seeking any software or documentation that is the intellectual property of PNR, see response to VZ-ATT 1-23.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-87: Explain in detail the basis for the default input for low-density DLC site and power used in the HAI 5.2a and the reasons it differs from earlier versions of the Hatfield Model. Provide all documents concerning, referring or relating to this input.

Respondent: R. Mercer/ J. Donovan

RESPONSE: AT&T objects to the portion of this information request that requests information regarding earlier versions of the Model. See response to VZ-ATT 1-34.

The bases for the default input for low-density DLC site and power used in the HAI 5.2a-MA Model is the experience of members of the engineering team in engineering and contracting for the installation of hundreds of DLC sites.

In addition, there are several manufacturers of good low-density DLC units, but it is simpler to base the model on one manufacturers technology. Members of the engineering team feel that the low-density DLC units manufactured by the Advanced Fibre Corporation ("AFC") are typical of highly efficient units from one of the rapidly growing leader in this market segment.

Details regarding the very compact low-density DLC units used in the HAI 5.2a-MA Model are discussed in the Direct Testimony of Mr. John C. Donovan. Features of the AFC 120-line and 240-line AFC DLC units include the ability to mount them on small, inexpensive fiberglass pads, on short stub poles, or small 'H' frames. These inexpensive small footprints allow the units to be mounted unobtrusively on public rights of way. The model includes costs for engineering and constructing the small DLC site, and for commercial AC power hookups. Information was obtained from AFC's website.

(www.fibre.com/products/main%5Fproducts%5Foutcabs.asp – 120line.)

The site preparation cost for the AFC UMC1000 are set forth below:

AFC UMC1000 SITE PREPARATION COST

The concrete pad can be pre-cast or it can be poured on-site. The concrete pad measures 41 inches by 38 inches.

a) Based on the requirements for a pad 41" x 38", the size is 10.8 square feet. Price including site clearance, placing conduits to 5 feet beyond pad, ground, wire mess (or rebar) and bumper posts is $35-$40 for cast-in-place.

b) Price of a pre-cast pad is $150 and the price for placing the pre-cast pad is $150. The price for placing a ground bed for pre-cast installation is $300.

c) The price for the power connection (including materials, placement of wiring, conduit and connections, permits and inspection) is $400 - $500 (50% material and 50% labor).

d) The price for placing DLC remote (up to 800 pounds) is $300.

	Pad Mount Cast-in-place	Pad Mount Pre-cast	Pole Mount
Electrical connection	$450.00	$450.00	$450.00
Place cast-in place pad mount	$400.00		
Pre-cast pad mount material		$150.00	
Place pre-cast pad mount		$150.00	
Place earth grounds		$350.00	
Place Cabinet	$300.00	$300.00	$300.00
Total	$1,150.00	$1,400.00	$750.00
Pad mount ($1,150 + $1,400)/2	$1,275.00		$750.00
Conservatively assume 100% pad	$1,300.00	(rounded up)	

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-88: Explain the basis for the default inputs for SAI Indoor Investment in HAI 5.2a and the reasons it differs from earlier versions of the Hatfield Model. Provide all documents concerning, referring or relating to this input.

Respondent: R. Mercer/ J. Donovan

RESPONSE: AT&T objects to the portion of this information request that requests information regarding earlier versions of the Model. See response to VZ-ATT 1-34.

As stated in Section 2.9 of the HAI 5.2a-MA HIP, "[d]efault prices are based on the result of an FCC examination of both indoor and outdoor SAIs."

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-89: Explain the basis for the default input for Integrated COT, installed in HAI 5.2a and the reasons it differs from earlier versions of the Hatfield Model. Provide all documents concerning, referring or relating to this input.

Respondent: R. Mercer/ J. Donovan

RESPONSE: AT&T objects to the portion of this information request that requests information regarding other versions of the Model. See response to VZ-ATT 1-34.

The assigned value for Integrated COT, installed pertains to the pro rata share of investment for hardware and commons involving multiplexer capacity in the central office utilized by each T1 carrier long loop extensions. The T1 extension option is very rarely used – only for extremely small numbers of customer locations that are extremely far from any clusters.

The assigned pro rata value per T1 extended Remote Terminal was estimated by a team of experienced outside plant experts who were in contact with vendors of appropriate small size IDLC equipment with the capability of being fed by T1 carrier on copper pairs. The material portion of this investment is based on vendor prices less discount.

A breakdown of costs into components is as follows. The equipment configuration was based on Seiscor S-24DU equipment.

Assumptions for "Shared Costs":

1	DS1 per RT
20	Shelf Capacity (20 DS1s)
75%	Shelf Utilization (i.e., 15 S-2-24DU systems, or 360 lines per COT shelf)

Engineering	$ 500
Installation (8 hrs. @ $55/hr.	440
Shelf Unit	1,360
Power Supply Units (2@ $1,365)	2,730
Craft Interface Unit	655
Software	560
	$6,245
	÷ 15

$416.33

Round to $420

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-90: Explain the basis for the default inputs for low-density DLC basic common equipment investment for initial lines and for additional lines in HAI 5.2a and the reasons it differs from earlier versions of the Hatfield Model. Provide all documents concerning, referring or relating to this input.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The assigned input for low-density DLC basic common equipment investment in the HAI 5.2a-MA is based upon the experience of members of the engineering team in engineering and contracting for the installation of hundreds of DLC sites.

In addition, there are several manufacturers of good low-density DLC units, but it is simpler to base the model on one manufacturer's technology. Members of the engineering team believe that the low-density DLC units manufactured by the Advanced Fibre Corporation ("AFC") are typical of highly efficient units from one of the rapidly growing leaders in this market segment.

Details regarding the very compact low-density DLC units used in the HAI 5.2a-MA Model are discussed in the Direct Testimony of Mr. John C. Donovan. There is no additional information available. All information relied upon by Mr. Donovan is included in his Direct Testimony and in the HAI 5.2a-MA HIP, Sections 3.5.4. and 3.5.11., which are reproduced here for ease of review.

Low Density GR-303 DLC Initial Common Equipment Investment			
Central Office Terminal Common Equipment		**Central Office Terminal Labor**	
SONET Firmware	$3,000	Engineering	$660 (12.0 hrs.)
SONET Transceivers*	See Below*	Place Frames & Racks	$165 (3.0 hrs.)
Common COT Plug Ins	$1,200	Splice DSX Metallic Cable	$55 (1.0 hr.)
DSX-1 & Cabling	$800	Place DSX Cross Connections	$28 (0.5 hrs.)
		Connect Alarms, CO Timing & Power	$55 (1.0 hr.)
		Place Common Plug Ins (21 ea.)	$28 (0.5 hrs.)
		Turn Up & Test System	$165 (3.0 hrs.)
Subtotal	$5,000	Subtotal	$1,200
Allocation of COT Host Digital Terminal Investment per 120 RT 120 lines / 672 lines per COT HDT = 17.86% x 75% assumed HDT fill = 23.81%	.2381	Allocation of COT Host Digital Terminal Investment per 120 RT 120 lines / 672 lines per COT HDT = 17.86% x 75% assumed HDT fill = 23.81%	.2381
Subtotal	$1,200	Subtotal	$300
SONET Transceivers*	$2,000*		
Subtotal	$3,200	Subtotal	$300
Remote Terminal Common Equipment		**Remote Terminal Labor**	
Cabinet w/ Channel Bank Assembly	$5,500	Engineering	$990 (18.0 hrs.)
SONET Transceivers	$2,000	Place Cabinet	$165 (3.0 hrs.)
Multiplexer and Channel Bank Assembly Commons	$3,500	Copper Splicing (2 hrs. + 120 pairs @ 400/hr.)	$127 (2.3 hrs.)
		Place Batteries & Turn Up Power	$55 (1 hr.)
		Turn Up & Test System	$165 (3.0 hrs.)
Subtotal	$11,000	Subtotal	$1,600
Total = $16,000			

Any review of alternative costs for Integrated Digital Loop Carrier systems should not only focus on material costs, but especially should focus on hidden costs included in the category of Engineering and Installation of such systems. Engineering of standardized, simplified, factory pre-assembled systems is a simple affair. To quote a major vendor of such systems, "The cabinet is

completely assembled and tested at the factory. Once the cabinet is on site and bolted to its mounting pad, the only assembly required consists of connecting local power, connecting outside plant (OSP) facilities, connecting optical fiber facilities, installing the backup battery strings, and plugging the circuit packs into their assigned locations in the equipment."

Low Density GR-303 DLC Common Equipment Investment per Additional Line Increment			
Central Office Terminal Common Equipment		**Central Office Terminal Labor**	
SONET Firmware	$3,000	Engineering	$660 (12.0 hrs.)
Common COT Plug Ins	$1,200	Place Frames & Racks	$165 (3.0 hrs.)
DSX-1 & Cabling	$800	Splice DSX Metallic Cable	$55 (1.0 hr.)
		Place DSX Cross Connections	$28 (0.5 hrs.)
		Connect Alarms, CO Timing & Power	$55 (1.0 hr.)
		Place Common Plug Ins (21 ea.)	$28 (0.5 hrs.)
		Turn Up & Test System	$165 (3.0 hrs.)
Subtotal	$5,000	Subtotal	$1,200
Allocation of COT Host Digital Terminal Investment per 120 RT 120 lines / 672 lines per COT HDT = 17.86% x 75% assumed HDT fill = 23.81%	.2381	Allocation of COT Host Digital Terminal Investment per 120 RT 120 lines / 672 lines per COT HDT = 17.86% x 75% assumed HDT fill = 23.81%	.2381
Subtotal	$1,200	Subtotal	$300
Remote Terminal Common Equipment		**Remote Terminal Labor**	
Cabinet w/ Channel Bank Assembly	$5,500	Place Cabinet	$55 (1.0 hrs.)
Channel Bank Assembly Commons	$2,200	Copper Splicing (2 hrs. + 120 pairs @ 400/hr.)	$17 (0.3 hrs.)
		Turn Up & Test System	$110 (2.0 hrs.)
Subtotal	$7,700	Subtotal	$200
Total = $9,400			

AT&T objects to the portion of this information request that requests information regarding earlier versions of the Model. See response to VZ-ATT 1-34.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-91: Identify the members of the panel of "outside plant experts" used to determine the cost for buried drop placement in urban areas described on page 16 of the Inputs Portfolio. Provide all documents concerning, referring or relating to the appropriate aerial and buried drop placement rates used by this panel of experts. Provide all documents concerning, referring or relating to the various drop placement rates used in HAI 5.2a.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The outside plant experts referred to are:

Mr. Lawrence Bonwick
Mr. Ernest Carter
Mr. John C. Donovan
Mr. Dean Fassett
Mr. Thomas Madden
Mr. Joseph P. Riolo
Mr. Joaquin Sueiro
Mr. James Wells

AT&T possesses no documents responsive to this request. It is because of the lack of verifiable documentation from public sources or the ILECs that the opinion of the outside plant experts was relied upon (*see* Support portion of Section 2.2.2 of the HAI 5.2a-MA HIP).

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-92: Provide all documents concerning, referring or relating to the current per foot costs of copper cable. Provide all documents concerning, supporting, referring or relating to the appropriate cable costs in Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: See responses to VZ-ATT 1-93 and VZ-ATT 1-94, and to information presented in Mr. Donovan's Direct Testimony.

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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-93: Identify the basis for the assumption that material costs represent 40% of the total installed cost of distribution cable and that engineering represents an average 15% of the installed cost as stated on page 22 of the Inputs Portfolio. Identify the "outside plant engineers" who agreed on these estimates and provide a copy of all documents concerning, referring or relating to this determination.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The referenced figures apply only to small size copper cables in the HAI 5.2a-MA Model. As noted in the HAI 5.2a-MA Inputs Portfolio (included as an Exhibit to Dr. Mercer's Direct Testimony):

> *In the opinion of expert outside plant engineers whose experience includes writing and administering hundreds of outside plant "estimate cases" (large undertakings), material represents approximately 40% of the total installed cost. This is a widely used rule of thumb among outside plant engineers. Such expert opinions were also used to determine that the average engineering content for installed copper cable is 15% of the installed cost. The remaining 45% represents direct labor for placing and splicing cable, exclusive of the cost of splicing block terminals into the cable.*

The recommendations of the engineering team were based on their extensive experience. It should be noted that the FCC found these parameters to be reasonable. AT&T does not know of any workpapers or other documents responsive to this request.

The outside plant experts are identified in the response to VZ-ATT 1-91.

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REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

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VZ-ATT 1-94: Identify the members of the engineering team that was used to estimate the installed cost of copper cable for sizes of 400 pairs and larger, and identify the "installed cable costs around the country" that were reviewed by this team in arriving at its estimates. Provide all documents concerning, referring or relating to the appropriate installed cost of copper cable in Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: Information available on the public record is being included as an attachment to this response.

Other installed cable costs around the country that were reviewed by individual members of this team were obtained under third party protective orders, unique to each state. Consequently, the information obtained under such protective orders cannot be provided outside of each individual state jurisdiction.

The outside plant experts are identified in the response to VZ-ATT 1-91.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-95: Provide all documents concerning, referring or relating to the estimation of the material cost per foot of duct described on page 27 of the Inputs Portfolio.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The material cost of duct, at $0.60 per foot was determined based on the fact that 4-inch PVC conduit is a commodity item, and members of the engineering team have had extensive experience in purchasing thousands of duct feet of such conduit material. In addition, validation efforts involved contacting three suppliers who supplied prices of $0.515/ft., $0.585/ft., and $0.648/ft., which the engineering team felt validated the assigned input value of $0.60 per foot in the HAI 5.2a-MA Model.

Copies of documents used in validation have been provided in response to information request 80, attachment pages:

Fassett 3
Fassett 234
Fassett 251

In addition, on October 16, 2000, in connection with another regulatory proceeding, Mr. Donovan made a telephone call to a national manufacturer of 4-inch PVC conduit. Following is the information received by Mr. Donovan from that telephone call:

Manufacturer: National Pipe & Plastics, Inc.

Manufacturer's Spokesperson: Nancy (sales)

Question Asked by Mr. Donovan to manufacturer's sales representative Nancy:

"What would be the approximate price for a quantity of 100,000 feet of 4" PVC TELE-DUCT Type-C, including any quantity discounts?"

Regarding how much of the $0.65 per represented the estimated wholesaler markup:

Response from Nancy, of National Pipe & Plastics, Inc:

Nancy stated that it was not the policy of the company to deal directly with purchasers of such [small] quantities of product, and that she would try to have a wholesaler contact Mr. Donovan (such a telephone call was not received by Mr. Donovan). When pressed for an estimated price, the manufacturer's sales representative stated that assuming a higher range of markup, just to play it safe, that a cost of $0.65 would be a safe, reasonable estimate.

Based on Mr. Donovan's experience, it is not unusual for wholesalers to mark up products from approximately 7½% to 15%, or in this case $0.045 to $0.085 per foot. This would indicate a direct manufacturer to major ILEC price in the range of $0.565 to $0.605 per foot, which corresponds to other values received during validation of 4" PVC conduit material costs.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-96: Identify the allowance that is provided for stabilizing conduit placed in trenches and provide all documents concerning, referring or relating to the use of this allowance.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The following allowances for stabilizing conduit are included in the *Total UG Excavation & Restoration* investment inputs to the HAI 5.2a-MA Model. The costs are based on expert opinion. There are no additional documents specifically segregating the stabilization of conduit.

Conduit Placement & Stabilization						
Density Range	**Fraction Pavement/ft**		**Fraction Dirt/ft**		**Average Total UG Excavation & Restoration**	
0-5	*65%*	$5.00	*35%*	$1.00	$3.60	$10.29
5-100	*65%*	$5.00	*35%*	$1.00	$3.60	$10.29
100-200	*65%*	$5.00	*35%*	$1.00	$3.60	$10.29
200-650	*75%*	$5.00	*25%*	$1.00	$4.00	$11.35
650-850	*80%*	$5.00	*20%*	$1.00	$4.20	$11.88
850-2,550	*85%*	$9.00	*15%*	$4.00	$8.25	$16.40
2,550-5,000	*90%*	$13.00	*10%*	$11.00	$12.80	$21.60
5,000-10,000	*95%*	$17.00	*5%*	$12.00	$16.75	$50.10
10,000+	*98%*	$20.00	*2%*	$16.00	$19.92	$75.00

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-97: Describe in detail the manner in which the Hardrock Placement Multiplier was determined and identify the independent contractors who provided information used to develop this input. Provide copies of any and all documents concerning, supporting, referring or relating to the determination of the Hardrock Placement Multiplier. Identify any and all factors concerning or supporting this input. Provide a copy of any and all documents concerning, referring or relating to the appropriate input for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The Hardrock Placement Multiplier was determined by members of the engineering team, not by independent contractors.

Validation of the opinion of our experts was performed using information provided by a number of small, independent contractors. That information is displayed in the attachment to this response.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-98: Describe in detail the manner in which the Softrock Placement Multiplier was determined and identify the independent contractors who provided information used to develop this input. Provide all documents concerning, referring or relating to the determination of the Softrock Placement Multiplier. Identify any and all factors concerning or that support this input and the computations performed to generate this input. Provide all documents concerning, referring or relating to the appropriate input for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: See response to VZ-ATT 1-97.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-99: Provide all documents and data concerning, referring and relating to the FCC examination of both indoor and outdoor SAIs that was used to determine the SAI Investment inputs used as default values in HAI 5.2a. Provide a copy of all analysis that was done to determine that these are the appropriate inputs for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: See response to VZ-ATT 1-88.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-100: Provide all documents referred to or relied upon in determining the DLC channel unit investment inputs used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The cost of individual POTS Channel Unit Cards was estimated by a team of experienced outside plant experts with extensive experience in contracting for DLC channel units. For the Low Density DLC, the cost is based on vendor list prices and an estimated 25 percent discount based on large volume purchases. There are no known documents available on the public record. There is nothing unique to the Commonwealth of Massachusetts regarding the cost of DLC line cards.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-101: Provide copies of all documents referred to or relied upon in determining the optical patch panel investment inputs used in the HAI 5.2a-MA, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: The default input of $1,000 for the 12-fiber patch panel used in the HAI 5.2a-MA Model is based on the considerable experience of members of the engineering team in purchasing and installing hundreds of such line devices.

As stated in the HAI Inputs Portfolio:

> *The cost for an installed fiber optic patch panel, including splicing of the fibers to pigtails, was estimated by a team of experienced outside plant experts with extensive experience in contracting for optical patch panels. A fiber optic patch panel contains no electronics, nor moving parts, but allows for the physical cross connection of fiber pigtails.*

In addition, information was obtained from Bell Atlantic's web site for material supplied to the federal government. This information is a price list offered to federal government users who choose to purchase equipment via Bell Atlantic's logistics arm and can be found at: http://www.bell-atl.com/federal/html/tmp d12a.htm.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-102: Provide copies of all documents referred to or relied upon in determining the common equipment investment per additional line increment used in the HAI 5.2a–MA, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer/ J. Donovan

RESPONSE: A separate itemized listing of the material and installation costs for each item that is included in HAI 5.2a-MA DLC Common Equipment Investment per Additional Line Increment is provided within the HAI 5.2a-MA Inputs Portfolio, at Section 3.5.11. Additional details regarding DLC costs, including specific material and installation cost breakdowns, is included in the Direct Testimony of Mr. John C. Donovan.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-103: Identify the AT&T and MCI subject matter experts who were consulted to determine the Business Penetration Ratio input used in the Inputs Portfolio. Identify the individual(s) from HAI Associates who discussed this input with the subject matter experts, and provide information provided by the subject matter experts. Produce copies of all workpapers and backups generated to determine this input.

Respondent: R. Mercer

RESPONSE: AT&T has no documents responsive to this request. AT&T also cannot provide an exact number of subject matter experts consulted by HAI that led to the estimate of Business Penetration Ratio because the estimate was a result of numerous conversations involving a variety of subject matter experts that occurred over a number of years.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-104: Provide the Local Exchange Routing Guide data used to estimate the number of shared-use switches in determining the tandem/EO wire center common factor input.

Respondent: R. Mercer

RESPONSE: The Local Exchange Routing Guide ("LERG") is a Telcordia (formerly Bellcore) copyrighted publication licensed by AT&T. AT&T is not authorized to provide copies of Telcordia publications to other parties. The LERG is commercially available from Telcordia.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-105: Provide all "data submitted to the FCC" referred to in determining the transmission terminal investment inputs used in the HAI 5.2a-MA, along with a copy of all documents concerning, referring or relating to the determination that these are the appropriate inputs for Massachusetts.

Respondent: R. Mercer

RESPONSE: The data submitted to the FCC was submitted by BellSouth. It is a matter of public record. Verizon-MA can obtain a copy of the data from the FCC using the following citation: *Ex parte l*etter from W. W. Jordan, Vice President, Federal Regulatory, BellSouth, to Magalie Roman Salas, Secretary, FCC, re CC Docket No. 96-45 and 97-160, August 7, 1998.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-106: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the channel bank investment, per 24 lines inputs used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: The value for the channel bank investment per 24 lines input was provided by BellSouth. See response to VZ-ATT 1-105.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-107: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the digital cross connect system, installed, per DS-3 inputs used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: See response to VZ-ATT 1-105.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-108: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the investment per operator position used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: The developers of HAI 5.2a-MA do not have invoices, contracts or published estimates for the operator position investment used in the study for reasons stated in the Overview of the HAI5.2a-MA HIP. Nor were there any workpapers or other documentation generated in determining the input used in the study. The input estimate is based on HAI expertise and HAI discussions over a number of years with people at AT&T and others familiar with operator services and operations.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-109: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the tandem common equipment investment used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: Support for the tandem common equipment investment can be found in *A Study of AT&T's Competitors' Capacity to Absorb Rapid Demand Growth*, a copy of which is attached to the response to VZ-ATT 1-16.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-110: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the STP minimum common investment per pair used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: See response to VZ-ATT 1-105.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-111: Provide copies of all invoices, contracts, catalogs, published estimates or other documents referred to or relied upon in determining the SCP investment per transaction per second used in the HAI 5.2a, along with a statement of all factors that support these inputs and all computations performed to generate these inputs. Provide a copy of all documents generated in determining the appropriate input for Massachusetts.

Respondent: R. Mercer

RESPONSE: See response to VZ-ATT 1-105.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-112: Provide all documents, including but not limited to workpapers, reports, memoranda and correspondence, which summarize, describe, initiate or otherwise relate to any attempts to verify the validity of HAI 5.2a or any prior version or release of the Hatfield Model or any variation thereof, or of the outputs it produces.

Respondent: R. Mercer/J. Donovan

RESPONSE: See response to VZ-ATT 1-33.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-114: Does AT&T utilize the same fill factors used as default values in HAI 5.2a in doing their own network planning? If not, why not? Identify the fill factors AT&T uses in their own network planning.

Respondent: R. Mercer

RESPONSE: AT&T objects to this information request on the grounds that it is irrelevant and not reasonably calculated to lead to the discovery of admissible evidence. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's own operational experience to date is not relevant to that issue.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-115: What are AT&T's investments for transmission equipment that terminates both ends of an SS7 link, as defined by the HAI 5.2a?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-116: What are AT&T's service control points investments per transaction per second, as defined by the HAI 5.2a?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-117: What are AT&T's investments per operator position, as defined by the HAI 5.2a?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-118: What are AT&T's investments per public telephone station, as defined by the HAI 5.2a?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-119: What are AT&T's investments per installed DS-1 channel bank?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-120: What are AT&T's per pair STP investments as defined by the HAI 5.2a?

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-121: Identify how many STP pairs AT&T has in its U.S. domestic network and the average link termination fill percentage in those STP pairs.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-122: For each of the past five years, identify the location(s) and price per square foot that AT&T has paid for land on which switching or indoor transmission facilities are located within the State of Massachusetts.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-123: For each of the past five years, identify the location(s) and AT&T's cost per square foot of construction for buildings that house switching or transmission equipment in the State of Massachusetts.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-124: Identify AT&T's average investment per installed OC-48 add drop multiplexer.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-125: Identify AT&T's average investment per OC-48 optical regenerator.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-126: Identify AT&T's average investment per optical distribution panel (the physical fiber patch panel used to connect interoffice fibers to transmission equipment).

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-127: Identify AT&T's investment per foot for placing fiber optic cable in trenches in the State of Massachusetts.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-128: Identify AT&T's investment per foot in underground conduit for fiber optic cable in the State of Massachusetts.

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-114.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-129: With reference to page 27, lines 15-17 of Mr. Hirshleifer's direct testimony filed by AT&T in this proceeding, please explain in detail how Merrill Lynch arrived at its estimated 10.20 percent expected return on the market, and provide all workpapers, surveys, data, documentation, studies, and calculations relating to the estimate, including:

a. the companies in the Merrill Lynch sample group
b. the underlying data inputs
c. the time period from which supporting data are derived
d. the precise methodology or methodologies used by Merrill Lynch

Please provide the requested data in both electronic spreadsheet and hard copy.

Respondent: J. Hirshleifer

RESPONSE: AT&T objects to this data request as overbroad. Subject to and without waiving its objection, AT&T states that Mr. Hirshleifer is not employed by Merrill Lynch and is not privy to any of Merrill Lynch's workpapers, surveys, data, documentation, studies, and calculations. However, Mr. Hirshleifer utilizes Merrill Lynch's estimate of the expected return on the market published on The Alcar Group's website. The Alcar Group also publishes a description of the methodology used by Merrill Lynch. This description can be found at http://www.alcar.com/FAQQuestion.asp?SectionID=21&ContentID=31. A copy of this page is attached as a courtesy.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-130: Please provide the cost of money used by AT&T in its Total Incremental Cost Model (TICM) as well as the rationale and supporting documentation justifying that value. If this model is no longer used by AT&T, please provide the cost of money when the model was last used by AT&T. If the cost of money used in that model varies by state, provide the value and supporting documentation for Massachusetts and for every other state for which separate values were used.

Respondent: J. Hirshleifer

RESPONSE: AT&T objects to this information request on the grounds that it is unduly burdensome, irrelevant and not reasonably calculated to lead to the discovery of admissible evidence.

Subject to and without waiving these objections, AT&T states as follows: AT&T no longer maintains an operable version of TICM. Use of TICM was discontinued a few years ago and the model was deactivated as part of a larger effort to reduce AT&T's internal operating costs. TICM has been archived and has been completely removed from the large computer server on which it resided. Unlike the HAI 5.2a, which could be produced on a CD-ROM, TICM required approximately 30 gigabytes of storage. Retrieving the model from archives would require locating a server, re-creating an interface for the model and locating personnel who could run the model, all of which would be unduly burdensome. In any event, the TICM model was originally designed to develop incremental costs for providing AT&T long-distance network services – i.e., long-distance POP to POP network. TICM did not provide incremental costs for local network services. Thus, TICM is not relevant to this proceeding, since it did not address costs on an "apples-to-apples" basis with the costs at issue in this proceeding.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-131: On or about page 4 of Mr. Lee's direct testimony filed by AT&T in this proceeding, he makes the following statement: "In depreciation proceedings, such forward-looking economic plant lives are termed 'projection lives,' to differentiate them from 'remaining lives' and 'average service lives' which reflect past plant placements." Please provide by plant account, lives in accordance with Mr. Lee's definition and future net salvages that.

AT&T uses to depreciate its plant equipment.
AT&T uses to depreciate its fixed wireless equipment
AT&T or any affiliates use to depreciate cable television plant and equipment
AT&T affiliate, TCG (formerly Teleport), uses to depreciate its plant and equipment

Respondent: R. Lee

RESPONSE: AT&T objects to this information request on the grounds that it is overbroad, unduly burdensome, irrelevant, not reasonably calculated to lead to the discovery of admissible evidence, and seeks information that is proprietary and competitively sensitive. This case involves Verizon-MA's forward-looking economic costs to provide UNEs. AT&T's own experience to date is not relevant to that issue.

COMMONWEALTH OF MASSACHUSETTS
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D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-132: AT&T has announced trials of "fixed wireless" service. Please describe AT&T's plans to provide service in Massachusetts using fixed wireless technology, including the date such service will be initiated.

Respondent: R. Mercer

RESPONSE: See objection stated in response to VZ-ATT 1-131.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-133: Verizon's first set of information requests skips from 1-132 to 1-134. There appears to be no request 1-133.

Respondent: R. Mercer

RESPONSE: No response is necessary.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

REQUEST: Verizon Massachusetts Information Requests to AT&T Communications of New England, Inc.

DATE: May 29, 2001

VZ-ATT 1-134: Please describe and identify, by location, any and all switches and cable routes owned or operated by AT&T or any of its affiliates, such as TCG (formerly Teleport).

Respondent: R. Mercer

RESPONSE: See objection in response to VZ-ATT 1-131.

COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF TELECOMMUNICATIONS AND ENERGY

D.T.E. NO. 01-20

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VZ-ATT 1-135: According to Mr. Lee as stated in his direct testimony on page 6, the depreciation reserve is an extremely important indicator of the depreciation process. Please provide AT&T's reserve percentages comparable to those used on the chart witness Lee exhibit 4, for the years 1990 through 2000.

Respondent: R. Lee

RESPONSE: See objection in response to VZ-ATT 1-131.