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## PRODUCT SUPPLEMENT – TRANSPORT

### **To The Master Service Agreement**

This Product Supplement – Transport (this “Supplement”) is incorporated by reference into and made a part of that certain Master Service Agreement (including all attachments and incorporated documents, the “Agreement”) entered into between the Seller and the Buyer who signed the Master Service Agreement as expressly provided therein and shall be effective as of the Effective Date defined in the Master Service Agreement. This Supplement provides additional terms and conditions governing the Transport Services. Capitalized terms or phrases not defined in this Supplement shall have the meanings ascribed thereto in the Agreement.

#### **1. SERVICE DESCRIPTIONS**

- (a) Remote Access Transport – shall mean those Services that can be provided from any site to any site or central office:

<u>Service Description</u>	<u>Available Capacity Levels</u>
Tail Circuit or Standard Loop	DS1
Central Office Colo-to-Central Office Colo	DS1,DS3,OC3,OC12,OC48,OC192
Central Office Colo-to-Central Office Colo with DS3/1 Mux	DS3
Point-to-Central Office Colo	DS1,DS3,OC3,OC12,OC48,OC192
Point-to-Central Office Colo with DS3/1 Mux	DS3
Point-to-Point	DS1,DS3,OC3,OC12,OC48,OC192

- (b) Combined Access Transport – shall mean a configuration where Buyer obtains a high capacity Service from Buyer’s site to Seller’s hub and lower speed Services to remote sites:

<u>Service Description</u>	<u>Available Capacity Levels</u>
<u>Combined Access Multiplexer</u>	
DS3/1 Mux Option	DS3
<u>Services to Seller’s Hub Facility</u>	
Point-to-Hub	DS3, OC3, OC12, OC48
Central Office Colo-to-Hub	DS3, OC3, OC12, OC48
<u>Services From Seller’s Hub Facility</u>	
Hub-to-Central Office Colo	DS3, OC3, OC12, OC48
Hub-to Central Office Colo with DS3/1 Mux	DS3
Hub-to-Central Office Colo with OC12/DS3 Mux	OC12
DS1 Tail Circuit	DS1
Hub-to-Point	DS1, DS3, OC3, OC12, OC48

- (c) Managed Wavelength – shall mean a configuration where a Buyer obtains dedicated point-to-point optical wavelength connections between two locations on Seller’s Facilities.

<u>Service Description</u>	<u>Available Capacity Levels</u>
Managed Wavelength	10 Gbps
	2.5 Gbps
	40 Gbps
	<u>100 Gigabit Ethernet also known as 100 gbE or 100 GigE: 100Gbps</u>
	<u>10 Gigabit Ethernet also known as 10gbE or 10 GigE: 10Gbps</u>
	<u>Gigabit Ethernet: 1.0Gbps</u>

*Managed Wavelength Service Feature Summary:*

- Retiming, Regeneration and Reshaping (“3R”) services will be provided for OC-48, Gigabit Ethernet line rate, 10 Gigabit Ethernet line rate and 100G Gigabit Ethernet line rate.
  - Available as a single optical path or as a dual optical path over diversely routed fiber pairs in separate conduits.
- (d) Definitions: Capitalized terms or phrases not defined in this Supplement shall have the definitions ascribed thereto in the Agreement. In addition to terms or phrases defined elsewhere in the Agreement or this Supplement, the following terms or phrases, where capitalized, shall be defined as follows:

“Access Multiplexer” shall mean a multiplexer placed on Buyer’s premises by Seller for purposes of aggregating low speed interfaces on the Buyer side into a network interface.

“Central Office Colo-to-Central Office Colo” shall mean Service between two central offices with Seller’s networking equipment in place at the rate specified.

“Central Office Colo-to-Hub” shall mean Service from a central office with Seller’s networking equipment in place to the Seller’s central networking site at the rate specified.

“Circuit Facility Assignment (“CFA”) Change” shall mean a change associated with moving an existing Service from one Dedicated Hub Facility Circuit to another Dedicated Hub Facility Circuit. These changes are submitted to Seller via Seller’s Service Order.

“Circuit Redesign” shall mean re-provisioning an active Service. Circuit Redesign addresses all changes other than CFA changes. These changes are submitted to Seller via Seller’s Service Order.

“Client Protection” shall mean a four fiber handoff between Seller and Buyer where the SONET equipment between two parties shall be configured with a unidirectional linear protect scheme.

“Concatenated” shall mean providing contiguous bandwidth through the network, from end to end. This is a SONET/SDH term. Bandwidths are OC3c, OC12c, and OC48c. Concatenation is a mechanism for allocating very large amounts of bandwidth for transport of a payload associated with “superrate service”, which is a service rate at a transmission rate greater than the normal maximum rate of OC1.

“Cross-Connect” shall mean the connection of Buyer’s Service to another service, either within Seller’s Facilities or from Seller’s Facilities to a Third Party’s Facilities. When available, the rate for a Cross-Connect is in addition to the standard charges and shall be calculated on an individual case basis and included in the Service Order. Prior to Seller’s interconnection of a

Cross-Connect to a Third Party Facility, Buyer agrees to provide a letter of authorization from such third party authorizing the interconnection of the Cross-Connect. Buyer agrees that if such third party revokes its authorization, Seller is expressly authorized to disconnect such Cross-Connect from such Third Party's Facilities without any notice by Seller to Buyer upon such revocation of authority.

"Dedicated Hub Facility Circuit" shall mean the high bandwidth interconnection between Buyer's Network and Seller's hub where multiple Tail Circuits are aggregated at Seller's hub and multiplexed onto Buyer's hub to Point or hub to Central Office Colo for delivery to Buyer's Network.

"DS1" shall mean dedicated, high capacity, full duplex channel with a line speed of 1.544 Mbps isochronous serial data having a line signal format of either Alternate Mark Inversion (AMI) or Binary 8 Zero Substitution (B9ZS) and either Superframe (D4) or Extended Superframe Formats (ESF). DS1 Service has the equivalent capacity of 24 Voice Grade (VG) services. AMI can support 24 each 56 Kbps channels and B8ZS can support 24 each 64 Kbps channels.

"DS1 Framing" shall mean an error control procedure with multiplexed digital channels where bits are inserted so that the receiver can identify the time slots that are allocated to each subchannel.

"DS3" shall mean a dedicated, high capacity, full duplex, channel with a line speed of 44.736 Mbps isochronous serial data having a line code of bipolar with three zero substitution (B3ZS). DS3 Service has the equivalent capacity of 28 DS1 Services at 1.544 Mbps or 672 Voice Grade (VG) services.

"DS3/1 Mux" shall mean a central office based multiplexer with a DS3 electrical interface for the network and 28 DS1 interfaces on the Buyer side.

"DS3 Framing" shall mean an error control procedure with multiplexed digital channels where bits are inserted so that the receiver can identify the time slots that are allocated to each subchannel.

"Gigabit Ethernet" is a term describing various technologies for transmitting Ethernet frames at a rate of gigabit per second (1000 Mbps). Seller's physical interface consists of optical fiber only (1000BASE-X).

"Hub-Central Office Colo" shall mean Service from Seller's central networking site to a central office with Seller's networking equipment in place at the rate specified.

"Hub-to-Point" shall mean Service from Seller's central networking site to any location at the rate specified.

"Line Coding" shall mean a coding system that shares the polarity of alternate "one" or "Zero" bits and controls the signal carrying the binary value to alternate between positive and negative.

"Load Shared Managed Wavelength Service" shall mean Service where Seller provides two client-side interfaces with two physically diverse unprotected Managed Wavelength Services with Buyer routing all traffic.

"Managed Wavelength Services" shall mean a private, dedicated optical wavelength capable of 1.0 Gbps up to 2.488 Gbps (commonly referred to as 2.5 Gbps), 9.953 Gbps (commonly referred to as 10 Gbps) or 103.125 Gbps (commonly referred to as 100 Gbps) where Buyer specifies both the A-location and Z-location on the Service Order.

“OC3” shall mean a dedicated, point to point, high capacity, full duplex channel with a line speed of 155.52 Mbps synchronous serial data. OC3 Service has the equivalent capacity of 3 DS3 Services, 84 DS1 Services, or 2,016 VG Services.

“OC3/DS3 Mux” shall mean a multiplexer with an OC3 optical interface for the network and 3 DS3 interfaces on the Buyer side.

“OC12” shall mean a dedicated, point to point, high capacity, full duplex channel with a line speed of 622.08 Mbps synchronous serial data. OC12 Service has the equivalent capacity of 4 OC3 Services, 12 DS3 Services, 336 DS1 Services or 8,064 VG Services.

“OC12/DS3 Mux” shall mean a central office based multiplexer with an OC12 optical interface for the network and 12 DS3 interfaces on the Buyer side.

“OC48” shall mean a dedicated, point to point, high capacity, full duplex channel with a line speed of 2,488 Mbps synchronous serial data. OC48 Service has the equivalent capacity of 4 OC12 Services, 16 OC3 Services, 48 DS3 Services, 1,344 DS1 Services, or 32,256 VG Services.

“OC192: shall mean a dedicated, high capacity, full duplex SONET channel with a line speed of 9.9953 Gbps synchronous serial data. OC192 Service has the equivalent capacity of 4 OC 48 Services.

“Off-Net Long Haul” shall mean Service where Buyer obtains dedicated point to point connections between a location on Seller’s facilities and a location on Third Party Facilities.

“Point-to-Central Office Colo” shall mean Service from any location to a central office with Seller’s networking equipment at the rate specified.

Point-to-Hub” shall mean Service from any location to the Seller’s central networking site at the rate specified.

“Point-to-Point” shall mean Service from Buyer’s or its User’s premise to any location at the rate specified.

“Premium Loop” shall mean Service from Seller’s Central Office Colo to Point designated by Buyer. Buyer agrees that Premium Loops are intended to be used as an alternative when a Tail Circuit is not available.

“Premium Loop with Mileage” shall mean Service from a point where Seller has networking equipment in place at the local serving office to a point where Seller does not have networking equipment in place at the local serving office at the rate specified. When applicable, this rate is in addition to the standard charges and shall be calculated on an individual case basis and included on the Service Order.

“Protected Managed Wavelength Service” shall mean Service where Seller provides a single client-side interface across diverse network paths.

“Regional Long Haul” shall mean Services with both end points in different markets on Seller’s facilities (i.e. between Austin and Houston).

“Tail Circuit” or “Standard Loop” shall mean Service from the local serving central office that would normally serve a remote location to that remote location at the rate specified.

“Unprotected Managed Wavelength Service: shall mean a Service where Seller provides a single client-side interface and one network path without a diverse network path.

“10 Gigabit Ethernet or 10 GbE or 10 GigE” shall mean a version of Ethernet with a nominal data rate of 10 Gbps, ten times as fast as Gigabit Ethernet. Seller’s available physical interface consists of fiber only. 10GBASE-R is used in the telecommunications industry to refer to Gigabit Ethernet transmission over fiber.

## 2. PROVISIONING INTERVALS FOR FACILITIES

- 2.1 Provisioning Intervals. The following Provisioning Intervals shall apply to the following Services that are provided entirely on Seller’s Facilities:

<u>Service Description</u> <u>Service Order)</u>	<u>Minimum Provisioning</u> <u>Interval (in Business Days, from date of</u>
DS-1 – Point to Point	20
DS-3 – w/o loop or colo cross connect	60
DS-3 w/ loop or colo cross connect	60
DS-3 – Vendor equip required	(Interval to be provided by Seller)
OCn – No vendor equip. required	(Interval to be provided by Seller)
OCn – Vendor equip. required	(Interval to be provided by Seller)
Managed Wavelength	(Interval to be provided by Seller)

The Provisioning Intervals for all other Services that are provided entirely on Seller’s Facilities shall be provided by Seller on an individual case basis (“ICB”) and agreed upon in the applicable Service Order FOC.

- 2.2 Remedies. If the Commencement Date does not occur prior to the Scheduled Service Date with regard to Services provided on Seller’s Facilities in accordance with Section 2.1 of the Product Supplement and such delay in the Commencement Date is not due to a Force Majeure Event or an act or omission of Buyer, Buyer’s Users or their respective representatives, then the following remedies shall apply:

- (a) Delay of Recurring Charge. Buyer should not be obligated to pay the Recurring Charges until such time as the Service commences.
- (b) Termination of Service. If the Commencement Date does not occur on or before sixty (60) days following the applicable Scheduled Service Date, the Buyer shall have the right to terminate the applicable Service by providing written notice to Seller to the extent that such notice is provided prior to the Commencement Date. In such event, unless otherwise provided in the Service Order, Buyer shall not be obligated to pay, and shall receive reimbursement for any amounts previously paid with regard to, any Recurring Charges or Non-Recurring Charges associated with such Service.
- (c) **SOLE AND EXCLUSIVE REMEDIES. THE PARTIES ACKNOWLEDGE THAT THE REMEDIES IN THIS SECTION 2 SHALL BE THE SOLE AND EXCLUSIVE REMEDY OF BUYER AND THE SOLE AND EXCLUSIVE LIABILITY OF SELLER FOR THE FAILURE OF THE COMMENCEMENT DATE TO OCCUR PRIOR TO THE SCHEDULED SERVICE DATE OR ANY OTHER DELAY IN PROVIDING THE SERVICE.**

- 2.3 SUPP OR DEFERRAL RIGHTS – with respect to any Services entirely on Seller’s Facilities, Buyer shall have the right to request up to three (3) deferrals of the Scheduled Service Date; provided that, unless otherwise agreed by Seller, in no event may Buyer request a deferral of more than thirty (30) days in aggregate from the Scheduled Service Date set forth in the initial FOC for the Service. The Supp Charges applicable to any such deferrals of the Scheduled Service Date are set forth in Seller’s Miscellaneous Price Schedule. With respect to any Services provided in whole or in part or Third

Party Facilities, any rights of Buyer to defer the Scheduled Service Date and any associated charges shall be determined by Seller on an individual case basis.

### 3. **TESTING PROCEDURES FOR FACILITIES**

3.1 **Testing Standards.** Test of each Service provided on Seller's Facilities shall be made to determine whether the Service complies with the following specifications:

- (a) **DS-1 Criteria** – The applicable Service must have a BBER of equal to or better than  $10^{-9}$  and Error Free Seconds of equal to or greater than 99.99%.
- (b) **DS-3 Criteria** – The applicable Service must have a BBER of equal to or better than  $10^{-10}$  and Error Free Seconds of equal to or greater than 99.99%.
- (c) **OC-3, OC-12, and OC-48 Criteria** - the applicable Service must have a BBER of equal to or better than  $10^{-12}$ , a BIP errored Seconds of less than or equal to 6 and BIP Severely Errored Seconds of zero.
- (d) **Managed Wavelength** – the applicable Service must have a BBER of equal to or better than  $10^{-12}$ , a BIP Errored Seconds of less than or equal to 6, and BIP Severely Errored Seconds of Zero.
- (e) **Other Services** – The testing procedures and criteria for acceptance shall be determined on an individual case basis and set forth in the applicable Service Order or other written agreement of the Parties.

3.2 **Testing Periods.** Seller shall use a reasonable duration for the tests for circuits provided on Seller's Facilities.

### 4. **PERFORMANCE AND OPERATING STANDARDS AND FACILITIES**

4.1 **Availability.** If a Service Outage (as defined below) occurs with respect to Services provided entirely on Seller's Facilities and Seller is unable to provide the Services at the Availability Factors (as defined below), then Seller will credit Buyer's invoice for the applicable period with an amount equal to the Service Outage Credit (as defined below) in the month following the request by Buyer and determination of the applicable Service Outage Credit pursuant to the provisions set forth below; provided that Buyer must request such Service Outage Credit and such request must be made within ten (10) days of the applicable Service Outage. If a Chronic Service Outage (as defined below) occurs for any circuit, then Buyer shall have the right to terminate the applicable circuit consistent with paragraph (e) of Section 4.2.

4.2 (a) **Service Outage.** A "Service Outage" shall mean that a circuit is unavailable during the relevant period either because (i) the circuit experiences a complete loss of service or (ii) the circuit experiences a Transmission Problem. A Transmission Problem shall mean the following:

- (i) For DS-1 and DS-3 Services a Transmission Problem shall mean when a DS-1 or DS-3 Service is experiencing a BBER of  $10^{-3}$  or worse from ten (10) consecutive seconds. Such Transmission Problem shall terminate when the applicable circuit experiences ten (10) seconds of a BBER of  $10^{-6}$  or better.
- (ii) For OCn Services and Managed Wavelength Services a Transmission Problem shall mean when an OCn or Managed Wavelength Service is experiencing a Severely Errored Second for (10) consecutive seconds. Such Transmission Problem shall terminate when the applicable circuit experiences ten (1) seconds without a Severely Errored Second.

(b) A Service Outage shall begin (except with regard to a Transmission Problem, for which, see the next-to-last sentence of the paragraph) upon the earlier of Seller's actual knowledge of the Service Outage or Seller's receipt of notice from Buyer of the Service Outage and shall end upon the correction of the loss of service or the correction of the Transmission Problems as set forth above. In order to determine whether a Transmission Problem exists, Buyer shall be required to request and authorize an intrusive test to be taken of the applicable circuit; provided an intrusive test shall not be required to the extent that Seller has installed equipment that is capable of monitoring such Transmission Problems on an ongoing basis without the need for an intrusive test. The Parties

will cooperate on the timing and manner in which any such intrusive test is conducted, taking into consideration the need to minimize the interruption of Buyer's or other customer's services. In the case of a Transmission Problem, the Service Outage shall be deemed to have commenced upon Buyer's request for an intrusive test to the extent such test determines that a Transmission Problem has occurred. Notwithstanding the above, a Service Outage shall not be deemed to have occurred and no Service Outage will apply:

- (i) during periods (A) of less than ten (10) minutes, (B) in which Seller is not given access to its Facilities or equipment that are required to provide the Services or to remedy any Service Outage, (C) in which planned or scheduled maintenance or repair activities are occurring, (D) in which Buyer or its User continues to use the Services on an impaired basis, or (E) that are not reported to Seller within thirty (10) days of the date the Service was affected;
  - (ii) for interruptions that are caused by or due to (A) acts or omission of Buyer, its User or another third party, including without limitation an interruption on the Third Party Facilities that may provide a portion of the Services, (B) the failure or malfunction of facilities or equipment not owned or operated by Seller, including without limitation the failure of the power supply, or (C) a Force Majeure Event, or (D) disconnections by Seller for non-payment or other contract default or breaches by Buyer; and
  - (iii) for Services utilizing in whole or in part Third Party Facilities.
- (c) Availability Factor. The following Availability Factors shall apply to the following Services that are provided entirely on Seller's Facilities:
- (i) DS-1 Service – 99.90%
  - (ii) DS-3 Service – 99.95%
  - (iii) OCn Services – 99.99%
  - (iv) Managed Wavelength Services
    - a. Unprotected – 99.0%
    - b. Protected (Network protection; no client protection) – 99.9%
    - c. Load Shared – 99.99% one of the two diverse paths will be available

The Availability Factors set forth above shall be measured during each calendar quarter and is a measurement of the percent of total time that Service is operative and deemed available to Buyer in accordance with the above specifications when measured over such period.

- (d) Service Outage Credit. With respect to any Service Outages in excess of the Availability Factors, the Service Outage Credit shall be equal to an amount equal to (a) the Recurring Charge applicable to the affected circuit during the calendar quarter in which the Service Outage occurred multiplied by (b) the number of hours or fractions thereof that the Service Outage occurred during the applicable period divided by 2160 hours. Service Outage Credits are calculated after deduction of all discounts and other special pricing arrangements, and are not applied to governmental fees, taxes, surcharges and similar additional charges, nor are credits available for any usage based Services. **OTHER THAN THE ADDITIONAL TERMINATION REMEDY SET FORTH BELOW FOR CHRONIC SERVICE OUTAGES, BUYER'S RIGHT TO RECEIVE SUCH SERVICE OUTAGE CREDIT SHALL BE THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND THE SELLER'S SOLE AND EXCLUSIVE OBLIGATION IN THE EVENT OF A SERVICE OUTAGE OR FOR ANY OTHER CLAIM THAT SELLER FAILED TO MEET ITS OBLIGATIONS IN THE PROVIDING OF THE SERVICE.**
- (e) Chronic Service Outage. An affected circuit shall be deemed to have experienced a Chronic Service Outage to the extent that in any calendar month (i) four or more Service Outages have occurred with each such Service Outage having a duration of more than thirty (30) minutes or (ii) one Service Outage has occurred for a duration of more than forty-eight (48) hours, in each case where the applicable Service Outage has been reported by Buyer

to Seller with respect to any circuit within a calendar month. If a Chronic Service Outage occurs, then Buyer shall have the right to terminate the affected circuit upon providing written notice to Seller, without any incurrence of any Termination Charges; provided the Buyer terminates the applicable Service on or before the expiration of the calendar month following the month in which the Chronic Service Outage occurred. **BUYER'S EXCLUSIVE RIGHT TO TERMINATE THE AFFECTED CIRCUIT SHALL BE THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND THE SELLER'S SOLE AND EXCLUSIVE OBLIGATION IN THE EVENT OF A CHRONIC SERVICE OUTAGE.**

#### 4.3 Background Bit Error Rate.

(a) Standard. The following BBER standards shall apply with respect to Services that are provided entirely on Seller's Facilities:

- (i) DS-1 Service –  $10^{-9}$
- (ii) DS-3 Service –  $10^{-11}$
- (iii) OCn Services –  $10^{-11}$
- (iv) Managed Wavelength Services –  $10^{-12}$

In order to test to determine whether a circuit complies with the above BBER standards, Buyer shall be required to request and authorize an intrusive test to be taken of the applicable circuit for a period consistent with Section 3.2 above, provided an intrusive test shall not be required to the extent that Seller has installed equipment that is capable of monitoring such BBER on an ongoing basis without the need for an intrusive test. The Parties will cooperate on the timing and manner in which any such intrusive test is conducted, taking into consideration the need to minimize the interruption of Buyer's or other customer's services.

(b) Remedies for Failure to Comply with Standard. If a particular circuit experiences a BBER worse than that set forth in (a) above that is applicable to such circuit during such testing period, then Seller shall have a period of thirty (30) days to correct such deficiency. If after such thirty (30) day period Seller has not retested such circuit in compliance with the BBER standards set forth above, then Buyer shall be entitled to terminate the applicable circuit upon providing written notice to Seller provided prior to the circuit complying with such BBER standards set forth above. **BUYER'S RIGHT TO TERMINATE THE APPLICABLE SERVICE SHALL BE THE BUYER'S SOLE AND EXCLUSIVE REMEDY AND THE SELLER'S SOLE AND EXCLUSIVE OBLIGATION IN THE EVENT OF SELLER'S FAILURE TO MEET ITS BBER STANDARD OBLIGATIONS.**

4.4 Mean Time to Repair. Mean Time to Repair ("MTTR") shall be the average time required to repair a Service and restore its availability and is stated in terms of equipment and cable outages. The time is measured from the time that the Service Outage is reported by Buyer to Seller until Service is available. With respect to Services provided on Seller's Facilities, Seller will use all commercially reasonable efforts to (a) repair network equipment within an average of four (4) hours of when Seller's technical representation arrives on the applicable site where the equipment is located, not to exceed a total of six (6) hours from the time the Service Outage is reported and (b) have the first fiber on a cable cut restored within an average of ten (10) hours of when Seller's technical representative arrives on the applicable site where the cable cut is located, not to exceed a total of twelve (12) hours from the time the Service Outage is reported. Such averages will be calculated over a calendar quarter basis. Seller will undertake repair efforts on equipment or fiber when Seller first becomes aware of the problem, or when notified by Buyer and Buyer has released all or part of the Service for testing, at which point a trouble ticket will be established. Notwithstanding the above, the failure of Seller to meet such standards shall not constitute a default under this Agreement and Seller shall not be liable to pay Buyer any penalties or damages or credit any portion of the Recurring Charges or Non-Recurring Charges under this Agreement as a result of such failure, other than as set forth in Section 4.1 above.



4.5 **PERFORMANCE LIQUIDATED DAMAGES.** FOR THIS SUPPLEMENT, THE REMEDIES OF BUYER IN SECTIONS 2.2(C), 4.2(D), 4.2(E), AND 4.3(B) HEREOF SHALL CONSTITUTE BUYER'S PERFORMANCE LIQUIDATED DAMAGES FOR THE SERVICE OFFERED UNDER THIS SUPPLEMENT AND CONSTITUTE BUYER'S SOLE AND EXCLUSIVE REMEDIES FOR ANY PERFORMANCE FAILURE OF SELLER RELATED TO OR ARISING FROM THE SERVICE OFFERED HEREUNDER.