



# STI 20

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Interface technical specifications  
*for France Telecom's network*

*As required by Directive 1999/5/EC*

## **Turbo DSL service access interface characteristics for remote sites**

**Summary:** The Turbo DSL service is established between two private sites, a central site and a remote site, belonging to the customer who has subscribed to the service. This document describes the characteristics of the interfaces used for accessing the Turbo DSL service on remote sites.

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3. the fact that a service not yet commercially open is described in this document can in no case be considered as a binding commitment on France Telecom part to actually open this service.

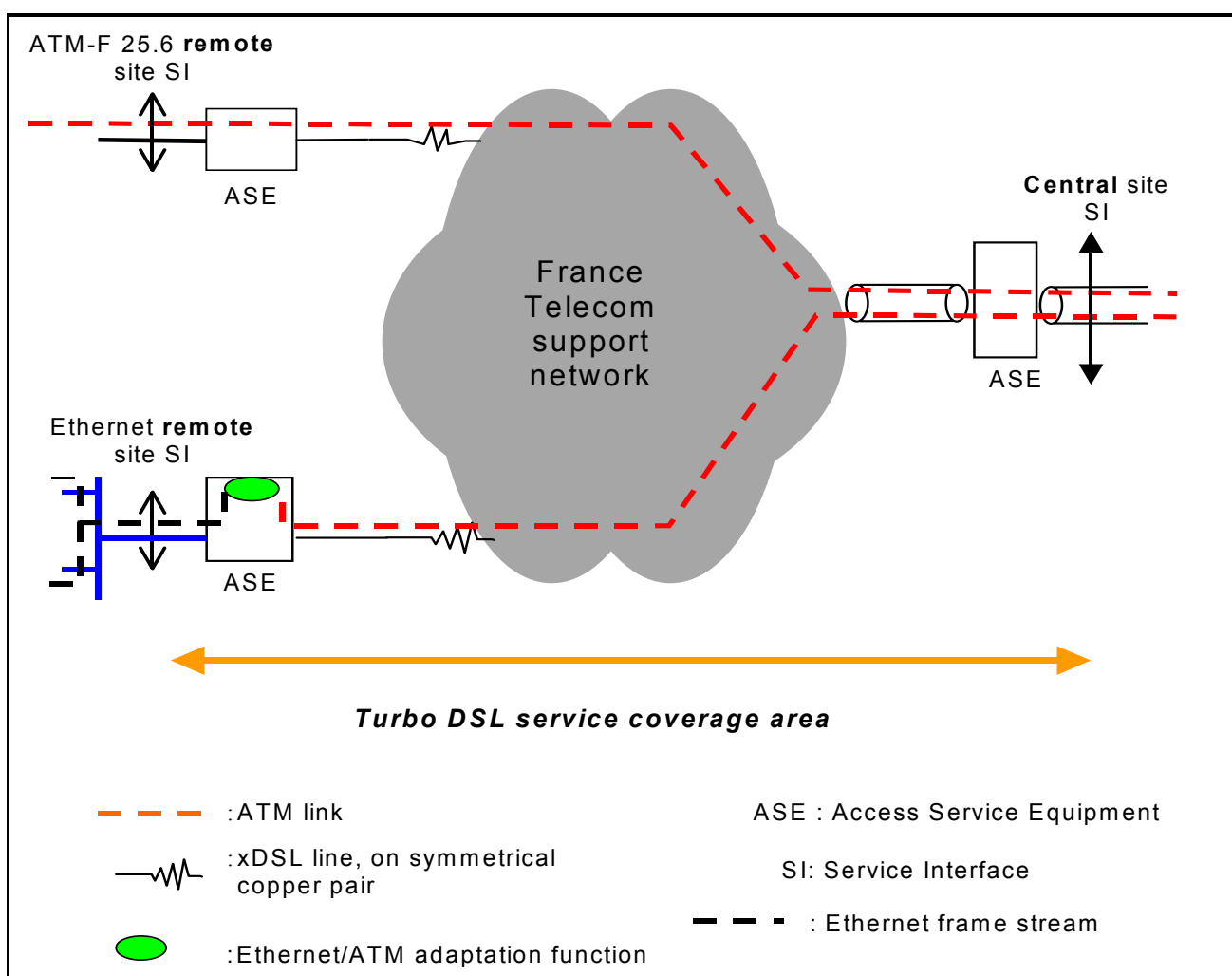
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## 1. OVERVIEW

The Turbo DSL service is supported by new technologies such as ADSL or SDSL, which are still being developed. Additional features will most likely be introduced into the equipment by manufacturers in the short term, which will allow modifications and improvements to the service, notably through the addition of new service interfaces. If so, the interface technical specifications (STI) document for the remote site service access interface will be updated and a new edition of this document issued.

## 2. OVERVIEW OF THE TURBO DSL SERVICE



**Figure 1: Customer transport network using the Turbo DSL service**

The turbo DSL service offers data transport between the Service Interface (SI) of a central site and several SIs on remote sites. The service is composed of:

- ◆ a gateway on the central site to the France Telecom network,
- ◆ ATM links established between the central and remote sites.

The central site gateway allows the transfer of quantized streams between the terminal equipment on the central customer site and the France Telecom support network. The remote sites use an xDSL line to support the links.

A symmetrical or asymmetrical (in terms of rates) bidirectional ATM link connects each remote site to the central site.

In the case of asymmetrical links (in terms of rates), the highest rate corresponds to the direction from the central site to the remote site (**downstream**) and the lowest rate corresponds to the direction from the remote site to the central site (**upstream**). The rates are between 75 kbit/s and 8 Mbit/s.

Two service classes are offered for ATM links (constant guaranteed rate, peak rate). The remote site only supports one ATM link and therefore only has one service class. The central site can simultaneously support ATM links from different service classes, symmetrical or asymmetrical.

### 3. REMOTE SITE INTERFACES

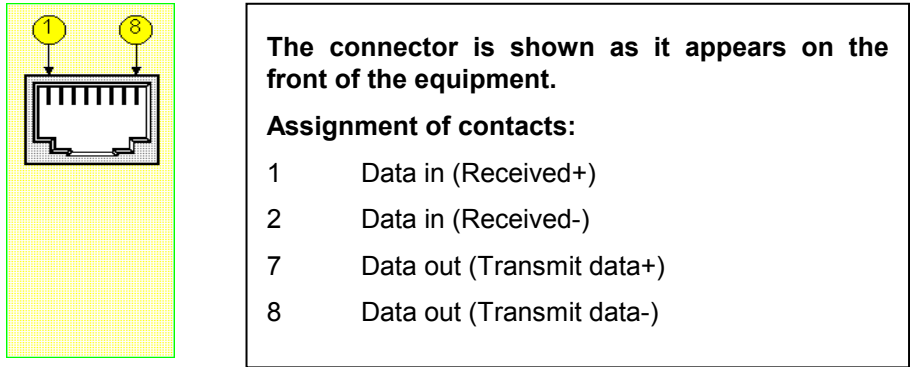
#### 3.1 ATM FORUM 25.6 MBIT/S ACCESS INTERFACE

This interface is defined below. The ATM layer of the Turbo DSL service complies with the international ITU-T recommendations and with the ATM Forum UNI 3.1 specification. The connections are at virtual channel (VC) or virtual path (VP) level. The interface supports an ATM type link where VPI/VCI=2/32. The ATM streams are of CBR, VBR-nrt or UBR type.

Interface type	Support type	Service interface connector	Maximum distance between customer equipment and ASEASE	Reference standards
ATM Forum 25.6 Mbit/s	UTP-3, UTP-5 or FTP-5	RJ-45 100 $\Omega$ connector compatible with 120 $\Omega$ wiring	90m: 10m of flexible leads + 80 m fixed flexible cable	af-phy-0040, 11/95 ITU I.432.5

**Table 1: Remote site service interface characteristics, ATM-F 25.6 Mbit/s case**

The following figure describes the ISO 8877 (RJ-45) female connector on the France Telecom ASEASE and its wiring:



**Figure 2: Description of the ATM-F 25.6 Mbit/s interface**

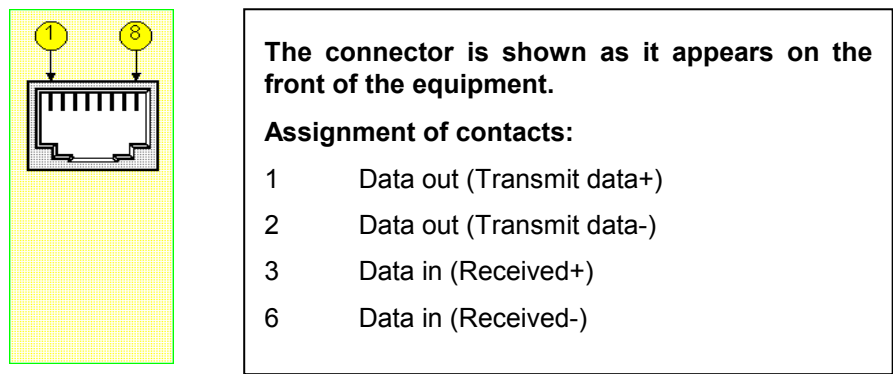
### 3.2 ETHERNET ACCESS INTERFACE

The transmission mode is half-duplex and the connector is an RJ-45 MDI-X female connector. The Ethernet frames must comply with the IEEE 802.3 standard, CSMA/CD access method. The ASEASE is transparent to the spanning tree protocol frames.

Interface type	Support type	Service interface connector	Maximum distance between customer equipment and ASE	Reference standards
Ethernet/Fast Ethernet	UTP-3 (Ethernet), UTP-5 (Ethernet/Fast Ethernet)	RJ-45 Female connector	100 metres	IEEE 802.3

**Table 2: Remote site Ethernet service interface characteristics**

The following figure describes the ISO 8877 (RJ-45) MDI-X female connector on the France Telecom ASE and its wiring:



**Figure 3: Description of the Ethernet interface**

## 4. HISTORY

<b>Edition</b>	<b>Date</b>	<b>Comments</b>
1	October 2000	First version
2	June 2002	ADSL reference removed so that the STI also applies to the SDSL-based Turbo DSL service. Description of the remote site Ethernet interface added.