

**Interface Document  
BID-0016  
April 1994**

**TRIAL DISCLOSURE OF  
ASYNCHRONOUS TRANSFER MODE  
(ATM)  
USER-TO-NETWORK INTERFACE**

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**TABLE OF CONTENTS**

	<b><u>Page</u></b>
<b>Document History</b>	<b>1</b>
<b>Disclaimer</b>	<b>2</b>
<b>1.0 Introduction</b>	<b>3</b>
1.1 ATM Services	3
<b>2.0 Technical Specification</b>	<b>5</b>
2.1 Physical Layer	5
2.2 Data Link Layer	5
2.3 Network Layer	5
2.4 Interim Local Management Interface (ILMI) Specification	6
<b>Appendix A</b>	<b>7</b>
References	7
<b>Appendix B</b>	<b>8</b>
List of Terms and Acronyms	8

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**List of Figures**

Figure 1.1 ATM Public UNI Interface	4
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**DOCUMENT HISTORY**

1      April 1994                  Initial issue

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RENAMED AS BELL CANADA BID-0016 FROM STENTOR ID-0018

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## 1.0 INTRODUCTION

Stentor's ATM services are based on the ATM Forum User-Network Interface (UNI) Specification, Version 3.0 and more specifically the Public UNI part of this specification.

The trial equipment covered by this document, in general, are in alignment with sections of the ATM Forum UNI Specification, Version 3.0.

The ATM Forum UNI Specification was developed to include markets in addition to those of Stentor, and thus may contain information which may not be applicable to Stentor.

## 1.1 ATM SERVICES

Services/capabilities that may be provided under this specification include:

- **VIRTUAL LAN INTERCONNECTION**  
ATM provides the capability for LAN to LAN connectivity at native speeds of 10 Mbit/s for Ethernet (IEEE 802.3) and 4 and 16 Mbit/s for Token Ring (IEEE 802.5) interfaces.
- **HIGH QUALITY VIDEO**  
ATM provides the capability for a near broadcast quality video transmission and/or conferencing service using the National Television Systems Committee (NTSC) baseband video interface.
- **CELL RELAY**  
This basic ATM service provides for the interconnection of ATM cell based products/applications to the ATM network. This connectivity can be at DS-3 or OC-3c interface speeds and is aligned with the ATM parameters found in the ATM Forum User-Network Interface Specification, Version 3.0 and supported by this disclosed interface.

Figure 1.1 illustrates the User-Network Interface that is described in this document. The various services/applications described above can be provided at that point using the appropriate terminal equipment.

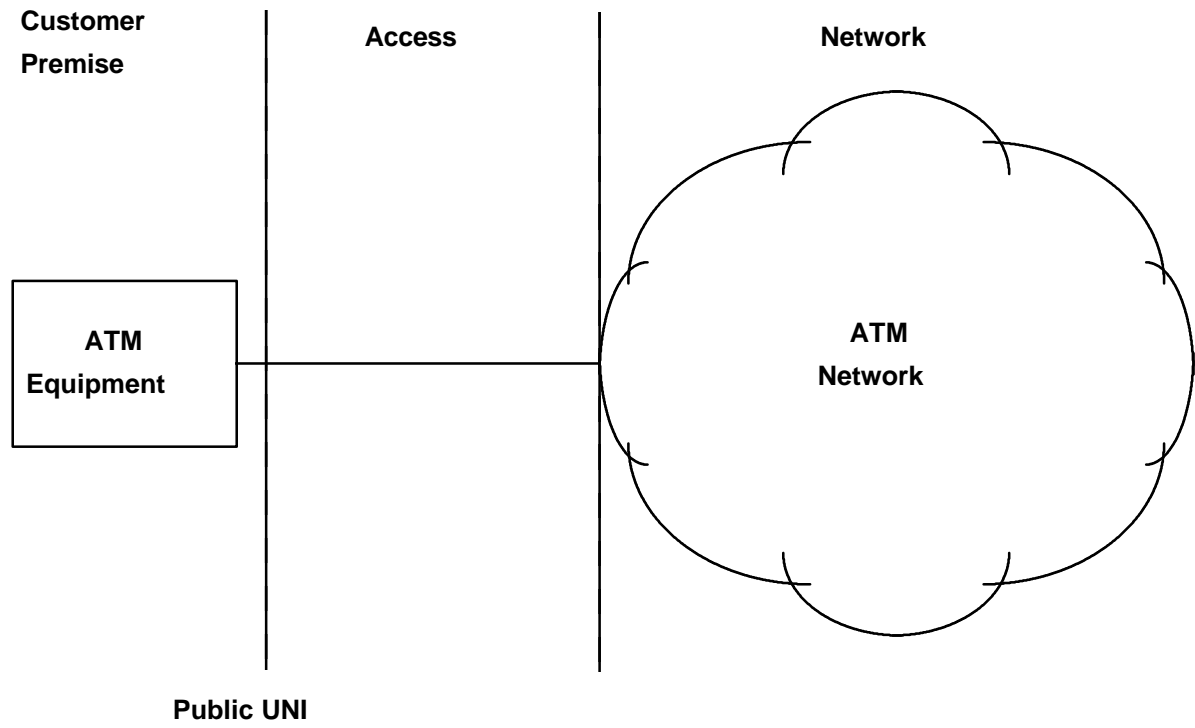


Figure 1.1 ATM Public UNI Interface

## **2.0 TECHNICAL SPECIFICATION**

### **2.1 PHYSICAL LAYER**

The physical layer is as specified in the ATM Forum UNI Specification, Version 3.0 with the following exceptions:

- Section 2.1 (SONET STS-3c Physical Layer Interface) - No support for Path FERF (Far End Receiver Failure) and Line FEBE (Far End Block Error) at this time.
- Section 2.3 (Physical Layer for 100 Mbit/s Multimode Fibre Interface) is not supported at this time.
- Section 2.4 (Physical Layer for 155 Mbit/s Interface) is not supported at this time.
- Section 2.5 (E3 Physical Layer Interface) is not supported at this time.
- Section 2.6 (E4 Physical Layer Interface) is not supported at this time.

### **2.2 DATA LINK LAYER**

The data link layer is as specified in the ATM Forum UNI Specification, Version 3.0 with the following exceptions:

- Section 3.4 (ATM Layer Functions Involved at the UNI (U-Plane)) - Do not support F5 End-to End Cells (passed transparently) at this time.
- Section 3.4.3 (Cells Discrimination based on pre-defined Header Field Values) is not supported at this time.
- Section 3.4.4 (Cells Discrimination based on Payload Type (PT) Identifier Field Values) is not supported at this time.
- Section 3.5 (ATM Layer Management Specification (M-Plane)) is not supported at this time.
- Section 3.6 (Traffic Control and Congestion Control) is not supported at this time.

### **2.3 NETWORK LAYER**

The basic call requirements for the network layer are defined in the ATM Forum UNI Specification, Version 3.0. Only PVC service is supported for this trial; SVC service is not supported at this time. Therefore, Section 5.0 (UNI Signalling) is not supported at this time.

**2.4 INTERIM LOCAL MANAGEMENT INTERFACE (ILMI)  
SPECIFICATION**

Section 4.0 (Interim Local Management Interface Specification) of the ATM Forum UNI Specification, Version 3.0 is not supported at this time.



**APPENDIX A: REFERENCES**

1. ATM Forum User-Network Interface Specification, Version 3.0, Sept. 10, 1993.
2. IEEE 802.3, "Information Technology - Local and Metropolitan Area Networks - Part 3: Carrier Sense Multiple Access with Collision Detection (CSMA/CD) Access Method and Physical Layer Specifications".
3. IEEE 802.5, "IEEE Standards for Local Area Networks: Token Ring Access Method and Physical Layer Specification".

**APPENDIX B: LIST OF TERMS AND ACRONYMS**

<b>ATM</b>	Asynchronous Transfer Mode
<b>DS-3</b>	Digital Signal - Level 3 (44.736 Mbit/s)
<b>FERF</b>	Far End Receiver Failure
<b>FEBE</b>	Far End Block Error
<b>IEEE</b>	Institute of Electrical and Electronics Engineers
<b>ILMI</b>	Interim Local Management Interface
<b>Mbit/s</b>	Mega bits per second
<b>NTSC</b>	National Television Systems Committee
<b>OC-3c</b>	Optical Carrier - Level 3 concatenated (155.52 Mbit/s)
<b>PT</b>	Payload Type
<b>PVC</b>	Permanent Virtual Circuit
<b>SONET</b>	Synchronous Optical Network
<b>SRCI</b>	Stentor Resource Centre Inc.
<b>STS-3c</b>	Synchronous Transport Signal - Level 3 concatenated (155.52 Mbit/s)
<b>SVC</b>	Switched Virtual Circuit
<b>UNI</b>	User-Network Interface