ATM User-Network Interface Specification

Version 3.1

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Acknowledgements

A specification of the breadth and significance as is contained in this document is possible only through the efforts of many individuals. The assistance of the numerous members of The ATM Forum who have brought contributions towards, discussed and reviewed the enclosed information is appreciated. It must not be overlooked that the Technical Committee was able to complete this implementation agreement because of the solid base of work performed by regional and international standards groups.

Special thanks are due to the “enablers” - the UNI 3.1 editing team led by Greg Ratta (Gregan Crawford, Bob Fenaglio, Henry Fowler, John Sikora and Rick Townsend) and the UNI 3.0 editing team led by Jim Grace (Richard Breault, Rao Cherukuri, John Jaeger, Jeff Kiel, Kieth McCloghrie and Lou Wajnaroski).

George Dobrowski
Chairman
The ATM Forum Technical Committee

Preface

Since the publication of the ATM User-Network Interface Specification, Version 3.0 (UNI 3.0), a number of international standards have been completed. In particular, recent progress within the ITU for the following ITU-T Recommendations: I.610, Q.2100, Q.2110, Q.2130 and Q.2931 has bearing on the interface specified in UNI 3.0. This version, UNI 3.1, of the interface specification has been created to bring The ATM Forum implementation agreements in line with the recent agreements in international standards and is intended to allow interoperation of equipment designed to the ATM Forum implementation agreements and equipment designed to international standards.

It should be noted that these changes render this new version imcompatible with version 3.0 for signaling and signaling virtual channels.

Foreword

Asynchronous Transfer Mode (ATM) is widely acknowledged as the base technology for the next generation of global communications. ATM provides a unique ability to handle the real-time networking requirements of emerging multimedia applications, while providing compatibility with the increasing bandwidth needs for current installations. ATM solutions are being deployed throughout the wide area and enterprise network backbone, and all the way to the desktop and home. This User-Network Interface (UNI) document that you are reading defines the primary specification for end-system connection to ATM networks.

Progress toward the definition of global Asynchronous Transfer Mode (ATM) standards continues at a rapid pace. This is the second published edition of the ATM Forum UNI specification, and contains several new sections which further define the operation of ATM in Local and Wide Area Networks. It represents the next step in the process which will allow a uniform deployment of interoperable ATM technology.

The UNI specification is the result of the combined work of hundreds of companies from all sectors of the industry cooperating towards a common goal. The process which results in rapid convergence and final agreement of so many diverse interests on a single specification is both immense and mind-boggling. It is the strength and flexibility of the underlying ATM technology and its ability to best handle the many conflicting requirements that enables this continuing progress.

The Technical Committee of the ATM Forum creates the UNI specification. The committee meets every 2 months in different locations around the world for up to a week at a time. Typically over 500 people attend these meetings, representing a wide diversity of interests and knowledge. Technical contributions for the meeting, several hundred in number, are sent out electronically ahead of time to the entire membership. This allows participants to review the information before the actual meeting. Contributions are assigned to specific working groups of experts. After a period of discussion and voting, a single recommend document is forwarded to the ATM Forum membership for final review and approval.

From its initial formation in November of 1991, The ATM Forum has grown to over 600 member organizations at the time of this writing. A great deal of credit goes to the Technical Committee for its ability to maintain rapid progress in spite of the difficult logistics required to reach consensus between such a large number of participants.

The industry specifications from the ATM Forum are based on work of international standards organizations. Completion of this document is due to the active participation and dedication of member companies, and individuals who often give up much of their personal time to accomplish the work. I would particularly like to acknowledge the effort of George Dobrowski and Jim Grace, the Chair and Vice Chair of the ATM Forum Technical Committee for their leadership in guiding our diverse and ever-growing committee to final agreement.

Fred Sammartino
President and Chairman of the Board
The ATM Forum

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