Telecommunications Industry Forum

Sponsored by the Alliance for Telecommunications Industry Solutions

Electronic Communications Interactive Agent Functional Specification

TCIF-98.006
Issue 3, Revision 2
07/30/2002

Electronic Communications Interactive Agent
Functional Specification

Prepared for TCIF by the Electronic Communications Implementation Committee.
For more information about TCIF, go to www.atis.org. To order this document, please visit the ATIS Document Store via www.atis.org. If you have questions or comments about this document, please contact the the document editor:

Stephen F. Reynolds, (314) 235-3449, sr4140@momail.sbc.com .

For ordering information, please contact:
ATIS
1200 G Street, NW Suite 500
Washington, DC 20005
(202) 628-6380
tcif@atis.org

Trademark Acknowledgments
RSA Security is a registered trademark of RSA Security Data Systems, Inc., a wholly-owned subsidiary of Security Dynamics Technologies, Inc., Bedford, Massachusetts.

Notice of Disclaimer and Limitation of Liability
The information provided in this document is directed solely to professionals who have the appropriate degree of experience to understand and interpret its contents in accordance with generally accepted engineering or other professional standards and applicable regulations. No recommendation as to products or vendors is made or should be implied.

NO REPRESENTATION OF WARRANTY IS MADE THAT THE INFORMATION IS TECHNICALLY ACCURATE OR SUFFICIENT TO CONFORMS OF ANY STATUTE, GOVERNMENTAL RULE OR REGULATION, AND FURTHER NO REPRESENTATION OR WARRANTY IS MADE OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OR AGAINST INFRINGEMENT OF INTELLECTUAL PROPERTY RIGHTS. ATIS SHALL NOT BE LIABLE, BEYOND THE AMOUNT OF ANY SUM RECEIVED IN PAYMENT BY ATIS FOR

THIS DOCUMENT, WITH RESPECT TO ANY CLAIM, AND IN NO EVENT SHALL ATIS BE LIABLE FOR LOST PROFITS OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. ATIS EXPRESSLY ADVISES ANY AND ALL USE OF OR RELIANCE UPON THIS INFORMATION PROVIDED IN THIS DOCUMENT IS AT THE RISK OF THE USER.

Revision History

12/07/2000 – Original Issue 3

06/13/2001 – Revision 1
1. To prevent an improper session close sequence, Sections 6.5, 7.8, and figure 4 are modified and Section 7.9 is added.
2. In Sections 9.3, 10.1, and 13, the reference to TCIF-98-009, Generic Implementation Guidelines for Connectivity has been changed to TCIF-99-016, Generic Guidelines for the use of TCP/IP in Electronic Bonding.

12/05/2001 – Revision 2
1. Removed HashedMessage (message integrity) message type. This was done to avoid redundant hashing for integrity purposes. TLS Protocol includes the hashing function to assure data integrity.
2. A recommendation is added that the IAs verify the authentication credentials and other relevant information regarding the trading partner.
3. A recommendation is added defining the minimum size and maximum numbers of TLS writes.
4. A recommendation is added regarding the implications of the Nagle factor on TCP/IP packets.
5. A recommendation for the implementation of a monitor in the socket manager is added. This monitor would issue an alarm if a configurable number of transactions is exceeded.
6. The object identifiers used in the production modules have been changed to conform to the values assigned in T1.274.2000. In order to uniquely specify the object identifiers the IA version (3) and release number (2) have been appended by the Technology Support editors.

Table of Contents

List of Figures

1 Introduction

The TCIF has recommended the use of Electronic Data Interchange (EDI), Transmission Control Protocol/Internet Protocol (TCP/IP) and Transport Layer Security (TLS) as a method of supporting interconnection between carriers. Traditionally, EDI transmissions have been exchanged between trading partners using a Value Added Network (VAN) or a direct connection, as outlined in Section 6, Communications, of the TCIF/EDI Guidelines. TCIF recognizes that for some business transactions, e.g., procurement of material using an 850 Purchase Order, a VAN or direct connect may still be used because the orders are normally stored and forwarded on a daily basis. The IA with TCP/IP using TLS is recommended for use with Local Service Orders, and can be used with all EDI transactions if a company so desires.

To functionally implement this recommendation the Interactive Agent (IA) has been developed. This document defines the technical specifications for the development, architecture, design, structure, and process-flow of the (IA).

The commercialization of TLS permits Issue 3 of the IA Specification to incorporate the more robust standard of TLS. This allows the Issue 3 IA to incorporate persistent sessions. While Issue 3 requires TLS, many toolkits allow for accepting an SSL3 handshake. The mechanism to identify messages from an IA using Issue 2 and SSL3 exists within this specification.

Extensions to the IA provide for the transport of non-EDI data such as Extensible Markup Language (XML) and plain text.

2 Objectives

This Interactive Agent specification embodies the following objectives:

- Open Architecture
- Public Standards
- Simplicity Of Design And Ease Of Implementation
- Wide Availability Of Development Tools
- Use Of Well Documented Technologies
- Provide For A Secure Transaction Environment:
  - Privacy
  - Authentication
  - Integrity
  - Non Repudiation