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**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

JR/T 0182-2020

**Light weight real-time STEP message transfer protocol
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard was proposed by the Securities Technical Committee of the National Financial Standardization Technical Committee (SAC/TC180/SC4).

This standard is under the jurisdiction of the National Financial Standardization Technical Committee (SAC/TC180).

Drafting organizations of this standard. China Securities Regulatory Commission Information Center, Shanghai Stock Exchange, Shenzhen Stock Exchange, China Securities Regulatory Commission Information Technology Service Co., Ltd.

Introduction

The agreement is the financial information exchange agreement, which is an agreement for electronic financial information interaction between global financial market institutions and participants, hereinafter referred to as the FIX agreement.

1 Scope

This standard specifies a lightweight real-time STEP message transmission protocol Used session mechanism, message format, security and encryption, data integrity, extension method, message format Specifications, data dictionary, etc.

This standard is applicable to support the exchange of business data between stock exchanges and market participants and related financial institutions. This standard can also be promoted it is used to support the session connection between various institutional systems in the securities and futures industry.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this article Pieces. For undated references, the latest version (including all amendments) applies to this document.

3 Terms and definitions

The following terms and definitions apply to this document.

Securities trading exchange protocol;STEP the industry information standard for the exchange of securities transaction data between the stock exchange trading system and the market participant system.

Financial information exchange; FIX International information standard for electronic

exchange of securities transaction information.

Fix session layer protocol; FIXT Electronic data transmission protocol independent of communication protocol (such as TCP, UDP, etc.) and communication medium (such as optical cable, satellite, etc.), FIX protocol Important sub-agreement.

4.1.1 Session layer retransmission

4.1.1.1

This standard specifies the session layer connection standard between the internal system of market participants and the stock exchange through an open interface. This standard it is a simplified version of the FIXT 1.1 standard of the FIX Standardization Organization, and the use of message tags follows the FIX 5.0 SP2 regulations. due to JR/T 0022-2014 Securities Trading Data Exchange Protocol is only a localized version of the FIX protocol. To highlight the direct source of the standard, the following abbreviation Call this standard "LFIXT".

4.1.1.2

Unless otherwise specified, the receivers, senders, and other communication participants mentioned in this standard refer to applications implemented in accordance with this standard.

Application procedures or modules, hereinafter referred to as "LFIXT participants". Programs or modules developed based on FIXT (hereinafter referred to as "FIXT participation Party"), if you want to communicate with LFIXT participants, you also need to follow the constraints of this standard.

4.1.1.3

Session layer retransmission is a retransmission mechanism specified by the session layer protocol to ensure orderly and lossless transmission of each session layer news. In the FIXT session layer protocol, the session layer retransmission is initiated by the message receiver when the message sequence number gap is recognized.

The method is to send a message retransmission request to the other party. This standard actually cancels the session layer retransmission of the FIXT session layer protocol.

It still appears as a standard FIXT session layer and can interoperate with the counterparty FIXT participants. Since a single LFIXT session uses a single A TCP connection is used as the underlying communication mechanism, so within a single TCP connection, every message will be transmitted in an orderly and without loss. Belong to the same Between successive TCP connections of a session, although there may be session layer message loss, the received session layer message will still be it has the nature of orderly reception. Because there may be message loss at the session layer under the LFIXT standard, the lost business messages will only be Retransmission through the application layer to be

restored.

4.1.1.4

Like the FIXT protocol, the LFIXT protocol itself does not limit the standard port number used. As a TCP-based session layer protocol, the port number used by LFIXT is recommended to be in the interval [1024,49151], and the specific value shall be separately agreed by the communication parties in advance.

4.1.2 Application layer retransmission

Since the session layer recovery mechanism of this standard is only for compatibility with the FIXT session protocol, it cannot be used as a true message recovery mechanism.

use. Therefore, it should be restored through a retransmission mechanism agreed by the application layer. The specific mechanism of application layer retransmission is not within the scope of this standard.

4.1.3 NxtIn and NxtOut

Each message sent and received by both parties of the conversation carries a message sequence number. Each end participating in the communication needs to maintain a pair of serial numbers (NxtIn, NxtOut), NxtIn represents the sequence number of the next expected incoming message, and NxtOut represents the sequence number to be assigned to the next outgoing message.

4.1.4 Session initiator and receiver

4.1.4.1

The establishment of a session requires an initiator and an acceptor. The initiator sends a Logon message first and hopes the other party to respond for a Logon message, the receiver is the one that waits for the initiator to send the Logon message and respond with the Logon message. meeting After the session is established, both the initiator and the recipient of the conversation can send and receive messages in both directions. Don't set the conversation initiator (Initiator), session acceptor (acceptor) and the sender and receiver of a particular message Confuse.

4.1.4.2

Similar to the session initiator and the session acceptor, it also defines the logout initiator and logout acceptor, the session reset initiator and the conference Word resets the concept of the recipient.

4.1.4.3

The FIXT protocol is suitable for various transport layer protocols (such as UDP), so it is impossible to use specific protocols such as TCP sockets.