

HKATS Trading Procedures

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CHAPTER 1 OPERATIONS OF HKATS

1.1 *HKATS*

~~HKATS is a trading system operated by the Exchange, the automated trading system of the Exchange, is provided by OM Technology AB ("OM") of Sweden. The Exchange has obtained a licence from OM in developing HKATS to accommodate the trading of Exchange products. It is a transaction based network system, with the host configuration located at provided by the Exchange and trading workstations located at Exchange Participants' premises. Exchange Participants' trading is conducted through use of a software known as "CLICK Trading". Alternatively, Exchange Participants may, with the consent of the Exchange, develop their own application software to connect to HKATS. The functionality of HKATS is set out in the HKATS User's Guide provided by the Exchange to all Exchange Participants which trade through HKATS.~~

CHAPTER 2 ACCESS TO HKATS

2.1 ~~*Means of Technical Requirements for Access*~~

~~To gain access to HKATS, Exchange Participants' configurations should include an Ethernet LAN connecting to the Multipoint LANline Network.~~

~~The telecommunications lines should be data lines with such bandwidth as may from time to time be specified by the Exchange and data communications network services are provided and supported by such telecommunications vendors as may be approved by the Exchange. To ensure maximum network service availability with one single point of contact, in addition to providing the telecommunications lines, this data communications network service provides for the installation of network routers, network monitoring, maintenance services and on going end user support. Each telecommunications line is capable of supporting multiple trading connections to HKATS, the~~

~~maximum number of which is determined by the Exchange from time to time.~~ The hardware, software, network configuration and cost requirements for Exchange Participants to gain access to HKATS are specified in the HKFE-HKATS Subscription and Licence Agreement (as defined in section 2.3.1 below). Such requirements may be changed by the Exchange from time to time by giving advance notice to Exchange Participants. A description of the HKATS access ~~such~~ requirements has is also been posted on the website of Hong Kong Exchanges and Clearing Limited ("HKEx") for Exchange Participants' information.

~~To further ensure a high level of network service availability, a second data transmission link should be installed by Exchange Participants as a backup to the primary link. Such backup is strongly recommended to reduce the potential danger of connection disruptions in case of any network equipment problems.~~

To gain access to HKATS, Exchange Participants are also required to subscribe to data communications network services from such telecommunications vendors as may be approved by the Exchange. Telecommunications lines should be data lines capable of supporting multiple trading connections to HKATS. Their bandwidth requirement and the maximum number of connections which may be made to HKATS shall be specified by the Exchange from time to time.

2.2 Access Eligibility ~~and Control~~

All Exchange Participants are eligible to trade through HKATS, subject to obtaining the prior approval of the Exchange in the form of a registration. Exchange Participants registered to trade through HKATS can either conduct trading through Click Trading or participate in automatic trading via the HKATS ~~OMnet~~ Application Programming Interface ("API"). They are in fact the exclusive means of access to HKATS by Exchange Participants. Each Exchange Participant must subscribe for and execute an API licence ~~the HKFE-HKATS Subscription and Licence Agreement~~ in the manner specified hereinafter in section 2.3 for each CLICK workstation or API connection before it will be permitted to gain access to HKATS.

~~A two-level network monitoring environment has been implemented in HKATS to monitor the connections between the host systems and all Exchange Participants' CLICK workstations and API connections. At the application level, a local heartbeat from a workstation application is detected at regular time intervals. In case of a lost heartbeat, an alarm will be generated and a message will be broadcast. The affected Exchange Participant's Orders will be maintained as inactive until the connection is resumed. In addition, the Patrol feature of HKATS provides comprehensive network management to monitor information for real-time diagnosis and compare network problems against thresholds. With this multiple-level detection capability, Exchange Participants' CLICK workstations or API connections are assured.~~

2.3.8 Cancellation of Exchange Participant Connection / Username(s) / Exchange Participant Node(s)

Exchange Participants which would like to terminate HKATS trading may do so by submitting a ~~Click Workstation Installation/Termination Request Form~~ to the Exchange.

2.4 Security Measures

There are three levels of security control, via hardware level, application level and user level.

At the hardware level, registered Exchange Participant nodes can only be connected to the network through the authorization procedures prescribed by the Exchange. When a user attempts to log on to the HKATS host computer via an Exchange Participant node, HKATS will automatically verify the node address to check if it is an authorized one. Without appropriate connection authority, the access will be denied.

At the application level, Exchange Participants may gain access to the HKATS host computer via the API. The API is the exclusive means of access to HKATS to ensure high system integrity.

At the user level, the application is protected from unauthorized access by means of username-password control. All valid users are granted a unique username, password as well as a signum. When a user attempts to log on, HKATS will check to see if that username is registered by looking into the central database of the host system. The username must also match with the password. Failure to comply with any one of the above conditions will result in access being denied.

It is the duty of every Exchange Participant and its registered HKATS users to keep confidential the password or passwords allocated to it or them.

For security purpose and also to ensure the uniqueness of each user type, their authority and accessibility will be confined to different sets of legal transaction type and menu access type respectively.

2.5 ~~[Repealed] Access Levels~~

~~Under the existing setting of HKATS, there are two categories of users, namely external and internal.~~

~~External users are those who gain access to the HKATS host computer via CLICK workstations or API connections. In contrast, internal users are those who gain access via MPA, CIBOIS, PD & Deetern applications.~~

~~For security purpose and also to ensure the uniqueness of each user type, their authority and accessibility will be confined to different sets of legal transaction type and menu access type respectively.~~

CHAPTER 7 CONTINGENCY PROCEDURES

~~The Markets operated by the Exchange through HKATS shall be open at such times as are specified in the HKFE Rules, Regulations and Procedures. The following circumstances may give rise to the Exchange altering such hours of operation:~~

7.1 System Failure

~~HKATS possesses certain redundancies which render it less susceptible to a total system failure. In case of fire, explosion, accident, flood, etc., which directly affect the HKATS host computer, the Exchange will immediately close the Market and switch the host computer to a warm stand-by situated at a recovery site which is located at the Telecom House in Wanchai. The Market will be resumed as soon as practicable.~~

The Exchange has installed a parallel sets of production and back up computer facilities, either of which can support the operation of HKATS.

In the event of a disaster or other event affecting the production facilities which results in the failure in whole or in part of HKATS and system recovery fails, the Exchange may temporarily suspend trading on HKATS until failover of the system to the backup facilities has been completed and the operation of HKATS can be resumed. Exchange Participants should refer to the HKATS User's Guide for further particulars and procedures regarding system malfunction or failure.

7.2. [Repealed] Loss of Data

~~HKATS was designed utilizing a journaling concept reducing the likelihood of data loss. Notwithstanding this, an internal operation and command procedure will be carried out to roll back all lost data and reproduce the current day's history file. This operation should be relatively transparent to all Exchange Participants as well as other market users and investors, and should not affect the overall integrity of the Market.~~

7.3 Equipment Failure

~~HKATS possesses certain redundancies which render it less susceptible to a total equipment failure. Equipment testing has been conducted under a variety of equipment failure scenarios which involved switching over from the primary server to the secondary server. The results of this testing have proven satisfactory. In an actual emergency situation, the switch over should be relatively transparent to Exchange Participants, other market users as well as investors.~~

In case of a failure, error or defect in any of the equipment relating to the trading of an Exchange Participant on HKATS (including but not limited to terminals, network equipment and communication lines), whether installed at the Exchange Participant's office premises or any other location, the Exchange Participant shall report the incident to the HKATS hotline immediately. Exchange Participants are requested to follow the procedures stipulated in the HKATS User's Guide regarding equipment failure.

An Exchange Participant can apply to the Exchange to rent an HKATS terminal (at its SOS Centre) temporarily in case of lost connectivity. The Exchange has the absolute discretion to determine whether or not to approve such application and allow the Exchange Participant to use any such HKATS terminal.

An Exchange Participant experiencing a temporary loss of connectivity to HKATS may also request the Exchange to delete orders from or conduct other processes on HKATS on its behalf ("On-Behalf-Of Processing"). On-Behalf-Of Processing is principally intended for real contingency situations to reduce the financial risk of an Exchange Participant when there is an unexpected temporary failure in system access. It is not intended to be a long-term alternative for the Exchange Participant. The

Exchange Participant is expected to restore its access to HKATS in the shortest time practicable. On-Behalf-Of Processing is subject to the availability of the resources of the Exchange at the time of an Exchange Participant's request. The Exchange will appraise each request for On-Behalf-Of Processing on a case-by-case basis and shall have the absolute discretion to turn down any request which it deems inappropriate. The Exchange shall not be liable to any Exchange Participant for any On-Behalf-Of Processing conducted on its behalf.

A fee shall be payable by an Exchange Participant for renting an SOS HKATS terminal and for any On-Behalf-Of Processing executed by the Exchange on its behalf.

7.4 ~~[Repealed] System Backup~~

~~Throughout trading on each Business Day, the data contained in HKATS is backed up. When the Market is closed, after trade operations are carried out and daily back-up is performed to ensure data integrity.~~

~~The Exchange has installed parallel sets of computer facilities, either of which can support the operation of HKATS. The production site is located at the Asia Pacific Finance Tower in Central. Continuous data synchronization is performed on a real-time basis between the two sets of computers. In case of a malfunction in the primary server, the computer will automatically switch over to the secondary server and trade processing will continue without any interruption.~~

~~In the event of a disaster relating to the production site during trading hours, the switch over to the backup site can under normal circumstances be made in a relatively short period of time, thus minimizing the impact on Exchange Participants' trading, trade processing and trading-related administrative activity.~~

~~In case of a malfunction of the back-up computer, the Chief Executive has a general discretion to make necessary arrangements.~~

7.5 ~~[Repealed] Typhoon and Black Rainstorm Warnings~~

~~The HKFE Board shall determine the trading and settlement arrangements of each Market operated by the Exchange upon the approach and retreat of typhoons and/or the issuance and discontinuation of black rainstorm warnings. Details of the arrangements are described more thoroughly in the procedures applicable to the respective Market contained in the HKFE Rules, Regulations and Procedures.~~