THE STOCK EXCHANGE, BOMBAY

BUSINESS REQUIREMENTS SPECIFICATION

for

The BSE OnLine Trading (BOLT) system

Ver 2.0

December 10, 1993
PREFACE

This document has been prepared on the basis of business modelling workshops held at BSE from May to August 1993.

This document presents the consensus achieved by the Market Advisory Groups (MAG5 and MAG30) and the Administrative Support Group (ASG) constituted by BSE. Names of MAG5, MAG30 and ASG members are furnished below. Inputs from Brian Taylor Associates, a U.K. based securities industry consultants, have also helped in the shaping of this document. These workshops were coordinated by the BSE Information Systems department.

<table>
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<th>Firm Name</th>
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<tr>
<td>M/s Jamnadas Morarjee &amp; Co.</td>
<td>Mr. Mahendra N. Kampani</td>
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<tr>
<td>Prabhudas Liladher Pvt. Ltd.</td>
<td>Mr. Dhiren Sheth</td>
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<tr>
<td>M/s. Asit C. Mehta</td>
<td>Ms. Deena Mehta</td>
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<td>M/s. R.N.J. International</td>
<td>Mr. Anand Jhaveri</td>
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<td>M/s. K. Jayantilal</td>
<td>Mr. Apurva Shah</td>
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MAG30

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<tr>
<td>M/s. G.B. Desai</td>
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<td>Mr. Ashok Khandwala</td>
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<td>M/s. D.S. Prabhoodas</td>
<td>Mr. Hemendra Kothari</td>
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<td>M/s. Madangopal C. Damani</td>
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<td>Mr. Bhagirat B. Merchant</td>
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<td>M/s. Sanat M. Dalal</td>
<td>Mr. Bharat Dalal</td>
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<td>M/s. Kamal Kabra</td>
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<td>M/s. Arvind M. Shah</td>
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<td>Mr. H. S. Jhaveri</td>
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### ASG

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<th>Name</th>
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<tr>
<td>Mr. J.J. Bhatt</td>
<td>Jt. General Manager</td>
</tr>
<tr>
<td>Mr. M.D. Vyas</td>
<td>Dy. General Manager</td>
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<td>Mr. A.A. Tirodkar</td>
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**DOCUMENT CONTROL PAGE**

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<td>Inclusion of Table 3 under Section 3.4 representing the Population of Scrips in different categories. Inclusion of Table 4 under Section 4.1.2 representing Protection percentages for B1,B2 and B3 categories. Amendment to section 2.3 of Vol I. Inclusion of Vol II of BRS.</td>
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1 INTRODUCTION

1.1 Document purpose

This document presents the business requirements for the BSE OnLine Trading (BOLT) system, which after approval by the BSE Governing Board, would serve as the framework for precise software specifications.

Note
In this document, "would" has been used wherever the system definitely caters to the stated option or feature, whereas "could" indicates the possibility of having such an option or feature available under the system. "Should" on the other hand, indicates the desirability of having the option or feature as part of the requirements.

Matters enclosed within square brackets "[......]" represent parameter settings or values, which can be changed within the design of the overall market structure.
1.2 The Stock Exchange environment

1.2.1 Stakeholders and their perspectives

The environment in which The Stock Exchange, Bombay (BSE) functions is made up of several players. In the course of providing a high quality infrastructure for trading and settlement, BSE endeavours to protect the varied interests of all the parties constituting its environment. While liquidity is perhaps the single most important criterion that determines quality, other criteria exist that are specific to the different interest groups. Table 1 summarizes the specific interests/concerns of the different stakeholders.

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<tr>
<th>Interest Group</th>
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<td>Investors</td>
<td>Fair marketplace</td>
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<td></td>
<td>Speedy and risk free settlement</td>
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<tr>
<td>Member brokers (&quot;members&quot;)</td>
<td>Growth in business</td>
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<td>BSE administration and the Securities and Exchange Board of India (SEBI)</td>
<td>Investor protection</td>
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<td></td>
<td>Regulation and surveillance</td>
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<tr>
<td></td>
<td>of the market</td>
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<tr>
<td>Companies</td>
<td>Listing services</td>
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<td>Banks and other institutions</td>
<td>Continuous trading</td>
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<td>Clearing intermediation</td>
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<td></td>
<td>Custodial services</td>
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<tr>
<td>ALL (including media and value added information vendors)</td>
<td>Information availability with least time lag</td>
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</table>

It may be observed that information availability, as also market liquidity, is of common interest to all participants.
1.2.2 BSE’s commitments

The market is made up of members who trade in scrips on behalf of investors, and further, the activities of this market have to conform to rules and regulations laid down by the regulatory authorities, such as the BSE administration, SEBI, and the Central Government. The BSE, consequently, has a responsibility for protecting the interests of investors, members and the national economy.

Investor confidence

Integrity of trading operations warrants that the trades be carried out in a fair and open manner, so that the investor gets the advantage of the best price prevalent in the market at the time of his trade. Confidence would build up if fairness of trading is demonstrable to the investor. Secondly, the investor is interested in a reduction of the time-lag between trade date and settlement date, as well as the time-lag between delivery of scrips and payment of money. Any improvement in these areas would lead to a minimization of risk involved in settlement of trades, and inject greater liquidity to the market, leading consequently, to a general improvement in investor confidence.

Members’ interest

Members earn their income by charging brokerage on their clients’ orders for buying and selling scrips. Hence, any measure designed to promote growth in business would be in their common interest.

National economy

The government is interested in ensuring that the market is well-regulated and grows in a direction consistent with the overall national priorities. Therefore, any effort directed towards promoting the "cult of equity" would be dear to the government.

1.2.3 Current scenario

Members trade with each other over a week for "B" group scrips and over a fortnight for "A" group scrips. The trades are settled between the members at the end of the week or fortnight respectively.
A computerised settlement system accepts daily trade data from members and delivers necessary reports to them, both daily and at the end of the settlement account. Reports are also delivered to BSE administration and the Clearing House.

Trading

Most trades are carried out with jobbers who may be viewed as "wholesale" dealers of scrips in which they specialize. At present, there are no regulations in force to differentiate the activities of jobbers and brokers, who execute clients' orders. Jobbers essentially operate on the spread between their bid and offer prices, and normally would not serve clients.

Briefly, the problems with the existing open outcry system are:

- there may be no jobbers at all for a particular scrip,
- jobbers may give one-sided quotes, or worse, no quotes at all,
- illiquid scrips attract few jobbers, due to which quote depth is poor, spreads are wide and volatility is high,
- congestion on the trading floor makes it difficult to locate a jobber in the less active scrips,
- in active scrips, many small orders remain unexecuted, and
- number of unmatched transactions is high (upto 30%).

Computerised settlement

The automated systems are batch processing-oriented, and hence, carry with them the intrinsic drawbacks of any batch system.

Briefly, the shortcomings of the existing computerised settlement system are:

- there is voluminous paper work,
- time lag at each stage of operation is large,
- timely information to the market as a whole, as well as to others interested, is not possible,
- no support is provided for pro-active surveillance, and
- inflexibility of the batch system makes changes in settlement schedules, business rules and market timings, extremely difficult.
Thus, the market as a whole (except for a few hundred scrips, which are fundamentally active) may not have the desirable attributes, such as low volatility and spreads, high liquidity and depth, that characterise a broad based stock exchange.

As the existing settlement procedure is not proposed to be changed, BOLT does not mitigate the problems associated with the existing settlement system, such as physical handling of paper certificates and dated transfer deeds. However, it is expected that the system should provide a strong push for changes required to be undertaken by BSE on the clearing side, as well as by the Stock Holding Corporation of India Ltd. on the depository front.

1.3 Genesis of Project BOLT

Project BOLT marks the first step in a strategic initiative launched by BSE to position the organisation as a modern financial institution, run on completely professional lines, so as to enable it to cope with the demands of an increasingly deregulated Indian economy. Deregulation of the economy places a greater, and in some instances, totally new responsibilities on the stock exchanges, to provide improved levels and a broader range of service to its stakeholders: investors - both individual and institutional, members, issuers, information providers and the regulating authorities.

BSE is favourably positioned to carry out this transformation, by virtue of its more than 115-year record of service in contributing to the growth of the Indian capital markets, and also by its proven track record in both the primary and secondary market segments. The fact that issuers from all over the country desire to seek listing privileges for their issues on this exchange, and the fact that over 70% of the business carried out in the entire country is transacted on this exchange, bear testimony to BSE's ability to provide a sound market at the current moment.

Recognising that the key business objective of sustained market expansion is possible only through use of Information Technology (IT), BSE has embarked, since 1989, upon a step-by-step process to integrate IT with its core business functions. In tune with the necessity to orient the organisation into an Online Enterprise, BSE has structured a four-phased computerisation programme, commencing early 1991.
Phase 1 covers dissemination of price data and market news, gathered manually, to the trading ring and offices of members located within its premises. This phase, commissioned in November 1992, is centred around the Display Information Driver System (DIDS).

Phase 2 extends the functionality provided by the BSE infrastructure to enable members to upload daily data required for the settlement system from their offices, and receive processed information in their offices. It is proposed to operationalise Phase 2 in December 1993.

Phase 3, christened Project BOLT, would introduce screen-based trading for "B" and "C" groups, covering equities and debentures, except the equities that are part of the "A" group. This online trading system is expected to go live by end 1994.

Phase 4 would extend the coverage of automated trading to include scrips in the "A" group. It is contemplated to commission this phase by end 1995.

1.4 Goals of the BOLT system

The BOLT system would achieve the following goals:

- increase in market transparency,
- enhancement in market quality through improved liquidity, by increasing quote continuity and market depth,
- reduction in settlement risks due to open trades, by elimination of mismatches,
- improvement in information availability, by catering to broad-based information requirements,
- betterment of MIS systems, and
- introduction of flexibility in systems, so as to handle growing volumes easily, to incorporate changes in business rules and to support geographical dispersion of market activity.
MARKET ACCESS

2.1 Trading sessions

The market would have the following sessions:

Pre-opening

This session is required to determine the official opening prices for scrips. The pre-opening sessions would last from [10.30 a.m.] to [11.25 a.m.], on all days when the market is open for continuous trading. In exceptional circumstances, when the BSE Governing Board changes the timings of the continuous trading session, the timings of the pre-opening session would also change.

Continuous trading

Trading in scrips would be permitted on a continuous basis during this session, which would normally be from [11.30 a.m.] to [2.30 p.m.], on all days except Saturdays, Sundays and BSE-declared holidays. The BSE Governing Board may, however, change these timings depending upon specific requirements. It may also, under exceptional circumstances, declare any day as a market holiday, after giving advance intimation to all concerned.

Post-closing

A separate session to allow trading at the official closing prices for all scrips for a further period of [2] hours, i.e. from [2.30 p.m.] to [4.30 p.m.] would be possible. These timings should apply only if other exchanges are not open after BSE closes its continuous trading session. However, if other exchanges remain open beyond the close of BSE's continuous trading session, then BSE should also have to consider extending its hours for continuous trading, and by extension, the commencement and end of the post-closing session.

2.2 Miscellaneous access

In addition to the access mentioned in Section 2.1 above, valid users would be allowed access into the system for purposes other than trading, such as for data upload and download required for "A" group, and online queries on the BSE Official Directory Online (BODO) system, from [9.30 a.m.] to [10.30 a.m.] and from [5.00 p.m.] to [8.00 p.m.], Mondays through Fridays. On Saturdays, only a morning session, from [9.30 a.m.] to [10.30 a.m.], would be available.
On any market working day, members would be permitted to enter orders or quotes on their TWS's any time from [9.30 a.m.] to [2.30 p.m.], and transmit the same to the Central Trading Computer (CTC) installed at BSE, from [11.30 a.m.] to [2.30 p.m.]. These orders or quotes may be transmitted either one by one or on a batch basis.

2.3 Geographical spread

The system as planned, would support all members having offices located in the BSE complex (P.J. Tower, Rotunda building and Cama building), as well as those located within a rough radius of 2 - 3 kms from the Dalal Street area. In other words, in addition to the Dalal Street vicinity, Fountain, Kala Ghoda, Cuffe Parade, Nariman Point and Churchgate areas, could also get connected with BSE for the purpose of trading.

The second stage of connectivity of member offices with BSE, to be initiated after BOLT has stabilised for at least [6] months, when members having offices anywhere within the metropolitan area of Bombay could be allowed to trade electronically.

While offices of members located within a radius of 2 - 3 kms from the Dalal Street area are expected to be connected to BSE by the 3rd quarter of 1994, it is proposed to commission the system in July 1994 with all terminals located within the BSE complex itself. At this stage, members not occupying offices within the BSE complex would have to avail of a common pool of terminals located within the BSE complex, having telephone connections with their offices outside.

2.4 Trader WorkStation (TWS) connectivity

Two different options would be available to members.

Under the first option, a maximum of four TWS's could be used by each member to trade. Each TWS would carry a separate workstation identification in the system.

For members requiring more than four TWS's to be connected, or for those planning to set up dealing room architectures, a Member Communication Adapter (MCA), connected to the desired number of TWS's, would be necessary. The MCA connection would enable members to have a network of terminals connected to each of the four TWS's. Members would be able to do their housekeeping functions on the MCA.

BSE would provide the software for TWS and MCA, while the members need to make their own arrangements for the PC hardware required for the TWS and MCA.
3 SCOPE

3.1 Instruments to be traded

*BOLT* will cater to all scrips except those in the list of specified scrips ("A" group). After successful computerisation of trading in "B" group, "A" group could be taken up.

3.2 Participants

The market participants covered by this system would include all of the present 558 members of BSE, as well as the new members (comprising of financial institutions, 25 corporate members and 71 individual members) proposed to be inducted during 1993-94. They would be of the following categories:

**Member** - An individual, partnership firm, a company or financial corporation holding trading rights on BSE would be termed as a member and his/its membership would be designated by the clearing member allotted by BSE.

**Trader** - Any individual authorised by a member and approved by BSE to trade on his/its behalf would constitute a trader. Traders are analogous to badge-holders in the present open outcry system of trading. Based on their activity profile, traders could do jobbing or broking.

**Representative Member** - Under certain circumstances, the BSE Governing Board, may at its discretion, direct the new member to work as a representative member for some time. A representative member is one who enjoys trading rights, but has to go through an existing member for clearing and settling his transactions.

In addition to traders, users of the system would include BSE administration (management and staff of market operations, information systems, market surveillance, listing, membership and investor services departments).

3.3 Interfaces

*BOLT* would interface with:

- BSE Office Information Support (*BOIS*) system,
- BSE Automated Clearing and Settlement (*BACS*) system,
- BSE Official Directory Online (*BODO*) system, and
- Information vending system

The Stock Exchange, Bombay December 10, 1993
3.4 Overview of BOLT

The system provides a quote-driven automated trading facility with the order book functioning as an "auxiliary jobber". The order book serves two purposes: first, it allows retention and matching of orders against one another where no quotes exist in the system for a particular scrip, and second, it improves the price competitive character of the market, in case investors are willing to deal at prices better than the current best quotes.

At the same price, jobber quotes would always be given higher priority than limit orders in the order book. Assuming that the most competitive price at a given moment is quoted by the jobber or a set of jobbers, any incoming order would first be matched against quotes of the jobbers, and only the residual quantity, left after exhausting the jobber quotes, would traverse through the order book. However, if the best price ruling in the market is not a jobber quote but an order book entry, then the incoming order would get matched against the order book.

Example 1

For a scrip XYZ, an offer from a jobber exists in the jobber book @ Rs. 52, and a pending sale order exists in the order book also @ Rs. 52. An incoming buy order in this scrip would get matched against the jobber's offer first, and only after the jobber's total depth is exhausted, will it get matched against the pending sale order. However, if the sale order in the order book had been @ Rs. 51.50, since the best price is from the order book, the incoming order would get matched against it first.

Higher the price of a bid or buy order, better is its price with respect to others, and lower the price of an offer or sale order, better is its price with respect to others. At the same price, an earlier timestamp would ensure a higher priority.

The system would obtain, on a continuous basis, the best bid and best offer from the jobber book and the best buy and best sell orders from the order book, where these are available. The best rates from both these books would form the touchline prices. The touchline for a particular scrip would show the best bid/buy and offer/sell rates available in the market at that point in time, along with the depths available at those rates, as specified in Section 4.5.1.

The system allows jobbers to reveal only part of their depth whenever a quote is posted, and through a multiplier (known only to him), set the total quantity bid or offered (again, known only to him). Without this facility,
jobbers may be less inclined to quote large depths. Further, jobbers would have to reenter their quotes every time their depths get exhausted.

Example 2

A jobber is interested in quoting a bid depth of 5,000 shares and an offer depth of 8,000 shares, but does not want to reveal these total quantities to the market. He may, therefore, choose to specify the depth he wants revealed, say 1,000 shares on the bid side, and 800 shares on the offer side. He would, accordingly, have to specify the multipliers as 5 on the bid side and 10 on the offer side. While the system would know that his total bid depth is 5,000 shares (1000 x 5) and his total offer depth is 8,000 shares (800 x 10), this information would not be available to the other market participants.

The concept of revealed depths and multipliers, in addition, allows sharing of large orders amongst jobbers at the same price (explained in Section 4.5.2). Jobber quotes may be cancelled or modified at any time.

The system encourages competition amongst jobbers by introducing an index called the Jobber Performance Index (JPI). JPI would be computed everyday for every jobber, based on his performance on factors such as, quote continuity, spread, price continuity, depth and market participation. The exact computation logic for JPI would be worked out at a later stage.

Quotes would be prioritised on the basis of price and time. In other words, a better quote, i.e., a higher bid or a lower offer, would have higher priority as compared to others, and further, for quotes at the same price, the jobber posting quotes earlier than the others would receive a higher priority. After observing the performance of the system for some time, the BSE Governing Board may decide that the JPI should form part of the quote priority logic. This option would provide an incentive to those jobbers contributing to a better quality market.

BOLT has been designed to allow execution of Limit Orders at a fixed price or better and Market Orders at the ruling prices, subject however, to a price protection percentage (explained in Section 4.1.2 - Market orders). This is necessary to avoid execution of market orders at unrealistic prices. It also allows storing of unexecuted limit and market orders, so that they could automatically get executed later, without any need for reentry. The system would thus, take care to ensure that all pending orders are executed, wherever possible, with a new quote or new order. Standing orders may be modified or cancelled any time. Standing orders are
prioritized by price and time, and they would receive lower priority as compared to jobber quotes at the same price.

For faster execution of limit orders at the current best price prevailing in the market, a facility of "HIT" the Bid or "TAKE" the Offer has been introduced. Orders of this type would be executed only to the extent of the quantity associated with the best price prevailing in the system when the order was placed.

The system would handle negotiated trades for large orders through an E-Mail type system. Negotiations between two parties, or among multiple parties, can be carried out electronically, with the system automatically generating a trade or trades after negotiations are successfully completed. Reporting of bad delivery transactions and client-to-client orders would also be possible under BOLT.

The minimum variation between two prices possible under the system is defined as a "tick". Table 2 provides the ticks that will be used initially for various scrip price ranges:

<table>
<thead>
<tr>
<th>Price of scrip (Rs.)</th>
<th>Tick (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 49.75</td>
<td>0.25</td>
</tr>
<tr>
<td>50 - 99.50</td>
<td>0.50</td>
</tr>
<tr>
<td>100 and above</td>
<td>1.00</td>
</tr>
</tbody>
</table>

All "B" group scrips covered under the system would be divided into 3 groups, viz., B1, B2 and B3. The floor and ceiling depths, market order protection percentage, circuit breaker limit, etc., would be defined separately for each group. This grouping, reviewed once in [3] months, would be based on the volume of trading for a particular scrip. It is proposed to introduce the system with the categorisation indicated in Table 3 on the next page.
Table 3: Population of scrips in different categories

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of scrips</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>150</td>
</tr>
<tr>
<td>B2</td>
<td>500</td>
</tr>
<tr>
<td>B3</td>
<td>Remainder</td>
</tr>
</tbody>
</table>

The system would display, on a continuous basis, scrip and market related information required to support traders. All quotes from jobbers with their revealed depths, best buy and sell prices from the order book, touchline prices for each scrip, last trade details and index movements, would be shown to all market participants. On the other hand, trade confirmations, pending limit orders and total depths available for a quote, would be displayed only to the trader who is directly concerned with these transactions.
4 TRADING MODEL FOR "B" GROUP

4.1 Transaction types

4.1.1 Quotes

Each jobber would enter his quote for a particular scrip into an online Jobber Book. The following components are associated with every quote:

- Jobber identification number
- Scrip code
- Bid rate
- Revealed depth of bid
- Multiplier on bid (known only to the jobber)
- Available depth of bid (computed by system, known only to the jobber)
- Offer rate
- Revealed depth of offer
- Multiplier on offer (known only to the jobber)
- Available depth of offer (computed by system, known only to the jobber)

For a quote to be valid, it must have both a bid and an offer, i.e. it has to be a two-way quote. Thus, the bid and offer rates, revealed depths and multipliers cannot be zeros. The revealed depths and multipliers need not be the same for the bid and offer sides of a quote. BSE administration would, from time to time, fix the minimum depth (floor) and maximum depth (ceiling) permissible for each scrip.

The available depth is a computed field arrived at by multiplying the revealed depth with the multiplier. The available depths for a quote are the maximum exposure of the jobber at those price, i.e. the maximum depths he is willing to buy and sell at those prices.

A jobber could either be a registered jobber (including market-makers approved by SEBI) or a non-registered jobber. After close of market every day, the JPI would be computed for each jobber in each scrip that he has jobbed in during the day. This would be used to calculate a weighted average JPI for each jobber. Initially, the JPI would only serve to indicate the performance of a jobber relative to other jobbers, but could after some time, become a factor used for registering jobbers. At that stage, the JPI could be used for prioritisation amongst jobbers for order matching.
4.1.2 Orders

All orders would be entered into an online Order Book. The different types of orders are:

Limit orders

These are orders for buying or selling a certain quantity of a particular scrip at a specified price or better, if possible. In case the required quantity or part of the required quantity is not available at the price specified, the balance unexecuted quantity would be stored as a standing limit order at the specified price. Standing limit orders would be killed by the system, either at the end of the day or at the end of the settlement, depending upon the choice exercised by the broker when the order was entered. Standing orders could, however, be cancelled or modified at any time.

The components associated with a limit order are:

- broker identification number
- client identification number (only for broker's own use on the TWS)
- scrip code
- buy or sell order
- quantity
- rate
- retention status (till end of day or end of settlement).

Market orders

Market orders, unlike limit orders, are orders to buy or sell a certain quantity of a particular scrip at the best price or prices prevailing in the market at that time. However, they have to be treated a little differently from the way they are handled in the open outcry system.

In an automated trading environment, there is a possibility that market orders may be executed at totally ridiculous rates, just because there are some quotes or orders at this price. Consequently, it is necessary to protect all market orders by having a protection price. The "protection price" would be calculated by the system every time a market order is placed. The protection price would be a fixed percentage of the touchline price, depending upon the categorisation of that scrip, at the time the market order was placed.
Table 4 presents the Protection percentages for B1, B2 and B3 categories.

Table 4: Market Order Protection limits

<table>
<thead>
<tr>
<th>Category</th>
<th>Market Order Protection %</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>10%</td>
</tr>
<tr>
<td>B2</td>
<td>15%</td>
</tr>
<tr>
<td>B3</td>
<td>20%</td>
</tr>
</tbody>
</table>

For market buy orders, protection would be applied to the touchline offer price, and for market sale orders, protection would be applied to touchline bid price. After attaching the protected price to the market order, this order would be executed like any other limit order.

It may be noted that market orders do not have a higher priority over limit orders, but since price is given the highest priority in the system, market orders would stand a better chance of execution than limit orders. The balance unexecuted quantity, if any, would be stored in the system as a limit order at the last traded price while executing the order.

Example 3

Broker X places a market order for buying 1000 shares of scrip ABC.

The touchline on his TWS while placing the order is Rs. 88 (bid) and Rs. 90 (offer).

Assume, offers exist from jobber A for 200 shares at Rs. 90, from jobber B for 300 shares at Rs. 95, limit sale orders exist from broker Y for 100 shares at Rs. 97, and from broker Z for 100 shares at Rs. 100.

In this case, the protection price would be Rs. 99, i.e. Rs. 90 (being the touchline offer price) + 10%.

(Example continued on next page)
Broker X's market order would thus get executed as under:

- 200 shares at Rs. 90 against jobber A,
- 300 shares at Rs. 95 against jobber B, and
- 100 shares at Rs. 97 against broker Y.

Since the other order for sale from broker Z has a higher price than the protection price, it will not be matched. The balance unexecuted order quantity of 400 shares would be stored as a limit order with a buy rate of Rs. 97, which happens to be the last traded price.

The components of a market order are:

- broker identification number
- client identification number (only for broker's own use on the TWS)
- scrip code
- quantity
- retention status (fill end of day or end of settlement, if converted to limit order)

Trading during the post-closing session would consist of only market orders at the official closing prices and hence there will be no need for protection to be applied.

"Hit" or "Take" orders

This is a variation of the market orders. It allows for faster order execution without cluttering up the limit order book. This method converts the keystrokes or mouse clicks of the broker into a limit order at the touchline price for a particular scrip, without his having to place a limit order. Further, all unexecuted orders of this type are automatically killed, and are therefore, not stored in the order book.
A broker interested in a particular scrip would ask the system to display the touchline of that scrip. He would then use certain predefined keys or mouse clicks, which would be different for buy and sell orders. The system would also ask the broker to specify the client identification number (may be skipped by him) and the quantity of the order. The system would then convert his buy or sell order for the quantity specified into a limit order and attach the touchline offer price for a buy order and the touchline bid price for a sale order. This order would be matched against jobber quotes and the order book for the quantity that can be executed. The actual execution status will be reported to him, while the balance unexecuted quantity, if any, would be killed, and therefore, removed from the system.

4.1.3 Negotiated deals

Negotiated deals are of two types:

- Computer deals, bilateral or multi-party, struck through the system by means of an E-Mail type of facility, or

- Non-computer deals, struck verbally between two members, but reported to the system for settlement purposes. Reporting of bad delivery deals would also be handled under this option.

4.1.4 Crossed deals

Such deals are struck within the broker's office, and they could represent an appropriation by the broker of a client order, or a matching performed by the broker of two opposing client orders. To obtain a timestamp, a broker would have to report all crossed deals struck within his office to the system. Deal rates, though not verified online against the ruling prices prevailing in the market, would be made available to BSE administration for further action, if deemed necessary.

4.2 Transaction handling

4.2.1 Quote handling

Quotes can be entered for a specific scrip into the jobber book at any time. Each quote must be a two-way quote, having all the components specified in Section 4.1.1. Every quote, when entered, would be timestamped by the system. There are no restrictions imposed by BOLT on the spread, i.e. the difference between the jobber's bid and offer rates.
A quote can be cancelled or components of a quote can be modified at any time, except while it is being executed. Any modification of a quote would change the timestamp, and therefore, the quote would lose its earlier time priority. There is no compulsion that modification to a quote must always result in an improvement in the quote. Replenishment of the revealed depth, or modifications to the multiplier, is treated as a modification to a quote for this purpose.

The revealed depth of a jobber's quote would automatically get replenished, as long as the total available depth (revealed depth x multiplier) is not exhausted. If depth on any side of a jobber's quote gets exhausted, i.e., available depth on that side becomes zero, then the quote stands automatically cancelled in the system. A new quote would have to be entered which would, of course, get a new timestamp.

The Jobber Book has a priority over the Order Book for matching of orders entering the system. Initially, the system would not differentiate between a registered jobber and a non-registered jobber for the purpose of order execution.

Jobber quotes would be prioritised by the system in the following manner:

- Price
- Timestamp

With the objective of introducing refinements, at a subsequent stage to provide incentives to jobbers contributing to a higher quality market (higher JPI), the quote prioritisation would be modified as given below:

- Price
- Jobber Type (Registered/Non-Registered)
- JPI
- Timestamp

4.2.2 Order handling

Both limit orders and market orders will be entered into the order book. "Hit" and "Take" orders, on the other hand, would not flow through the order book. Nevertheless, all orders would be timestamped.

Orders may be modified or cancelled at any time. Any modification would mean a new timestamp, and hence the order would lose its earlier time priority.
The priority for standing orders in the order book will be:

- Price
- Timestamp

4.2.3 Negotiated deal handling

Computer deals

A unique feature available under BOLT is the negotiation message (E-Mail type) facility provided between two or more parties for orders larger than [50] market lots. Once the deal is completed using this negotiation facility, the system would automatically pick up details of the confirmed deals without the counterparties having to report the same separately. While carrying out negotiations, the initiating members may not choose to disclose their identities, their depths and rates to the others.

In order to avoid misuse of this facility, it is proposed that the initiator making a bid or offer for a specific quantity at a specific rate would be bound to accept the deal, if the order can wholly or partially be executed against him. The initiator, can however, accept or reject counter offers having prices worse than or quantities more than that specified by him initially. Members proposing the counter offers would not know the order quantity and rate entered into the system by the initiator. The system would allow even the counterparties a choice whether or not to disclose their identities while negotiating.

Non computer deals

This would represent verbal deals struck between 2 participants, which get reported subsequently to the system for inclusion in BACS, the clearing and settlement system. Deal prices, under these circumstances, are not validated with the prices prevailing in the market. Deals relating to bad delivery rectification may also form part of this category.

Both buyers and sellers have to confirm such deals by the end of the day, i.e. [8.00 p.m.]. Deals remaining unconfirmed beyond this time would get killed.
4.2.4 Crossed trade handling

The system would allow members to inform details of crossed deals carried out in their offices to the system before the end of the day, i.e. by [8.00 p.m.]. Though no verification of rates with respect to the prevailing rates in the market would be done, the system would have a provision to accommodate this validation at a later stage and reject deals grossly out of line with prevailing market prices.

Crossed deals can be modified or even cancelled any time before [8.00 p.m.]. Crossed deals, duly timestamped, will be returned to the respective members.

4.3 Opening price determination

*BOLT* would have a preopening session as mentioned in Section 2.1, at the end of which, the official opening prices for all scrips would be determined. This session would commence from [10.30 a.m.] and end at [11.25 a.m.] on all market working days. Limit orders are allowed to be entered into the order book during this period. However, no quotes can be entered during this period, i.e. the jobber book would be disabled. The jobbers can, however, place orders into the order book.

An equilibrium price would be worked out for each scrip, once every [5] minutes, based on the orders existing in the system at that time for that scrip. The equilibrium price would be calculated in such a manner that it maximises the volume of trades for that scrip at that price.

Order would be allowed to be entered, modified or even cancelled during this period from [10.30 a.m.] to [11.25 a.m.]. However, between [11.25 a.m.] and [11.30 a.m.] no transactions would be allowed as the system would be busy computing the official opening prices. Market would open for continuous trading at [11.30 a.m.] at the official opening prices.
Example 4

Assume, the following orders are lying in the order book for scrip ABC at 11.25 a.m., when the system starts computing the opening price.

<table>
<thead>
<tr>
<th>Buy Orders</th>
<th>Sell Orders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broker</td>
<td>Qty</td>
</tr>
<tr>
<td>B1</td>
<td>500</td>
</tr>
<tr>
<td>B2</td>
<td>200</td>
</tr>
<tr>
<td>B3</td>
<td>1200</td>
</tr>
<tr>
<td>B4</td>
<td>700</td>
</tr>
</tbody>
</table>

The volumes that could be executed at the different prices are:

<table>
<thead>
<tr>
<th>Price</th>
<th>Demand</th>
<th>Supply</th>
<th>Volume Executable</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.25</td>
<td>Nil</td>
<td>1700</td>
<td>Nil</td>
</tr>
<tr>
<td>10.00</td>
<td>500</td>
<td>1200</td>
<td>500</td>
</tr>
<tr>
<td>9.50</td>
<td>700</td>
<td>1200</td>
<td>700</td>
</tr>
<tr>
<td>9.25</td>
<td>1200</td>
<td>1200</td>
<td>1200</td>
</tr>
<tr>
<td>9.00</td>
<td>2600</td>
<td>800</td>
<td>800</td>
</tr>
</tbody>
</table>

Thus, the official opening price would be taken as Rs. 9.25, since the volume is maximised at 1200 shares.

In case there is a tie between many prices, i.e. the volume is maximised at more than one price, then the price that is closest to the previous closing price would be taken as the official opening price.

In case of a further tie even after comparing with the previous price, then the closing prices on the two previous market working days would be compared and the price trend determined. The official opening price for the scrip would be that price out of the multiple possibilities that goes against the price trend.

Example 5

Assume, that for a particular scrip, the volume is maximised at two prices, say, Rs. 29 and Rs. 30. If the previous closing price in this scrip was Rs. 29.50 or above, the official closing price would be taken as Rs. 30. Otherwise, it would be taken as Rs. 29.
For scrips where no orders exist, the previous closing price would be treated as the official opening price.

All orders that can be matched, at the official opening price would be matched, and the members informed accordingly. The time of order entry is irrelevant for this purpose. Where demand for a scrip is more or less than its supply, the matching at the official opening price would be done on a pro-rata basis, rounded off to the nearest market lot, amongst all intending buyers and sellers respectively.

**Example 6**

Assume that at the opening price, buy orders exist for 1000 shares from broker A and 2000 shares from broker B. A sell order exists for 1200 shares from broker C.

Since the demand cannot be fully satisfied by the supply, there would be pro-rata matching between broker A and broker B in the ratio of 1:2. Thus, broker C would sell 400 shares to broker A and 800 shares to broker B.

All unmatched orders would be returned to the respective members on their TWS's and MCA's, and are therefore, not stored in the order book when the market opens. Brokers would have to resubmit these unexecuted orders, if so desired, from their TWS's to the CTC, using simple keyboard entries or mouse clicks.

4.4 Closing price computation

The official closing price for a scrip under this system would be determined as follows:

- if 20 market lots have been traded during the last 15 minutes, then the weighted average price for the last 20 market lots would be considered,

- if 20 market lots have not been traded, but at least 10 trades have taken place during the last 15 minutes, the weighted average price for the last 10 trades would be considered,

- if 10 trades have not taken place during the last 15 minutes, but have taken place during the last 30 minutes, the weighted average price for the last 10 trades would be considered,
- if 10 trades have not taken place but at least one trade has taken place during the last 30 minutes, the weighted average price of all trades in the last 30 minutes would be considered, and

- if there are no trades during the last 30 minutes, then the last traded price would be taken as the official closing price.

Weighted average prices, calculated as above, would be rounded off to the nearest tick.

Example 7

Assume that for a particular scrip having a market lot of 100 shares, the following trades had taken place during the last 30 minutes before market closure at 2.30 p.m.:

- at 2.29 p.m., 400 shares traded at Rs. 32.50
- at 2.25 p.m., 300 shares traded at Rs. 31.00
- at 2.20 p.m., 500 shares traded at Rs. 32.00
- at 2.05 p.m., 200 shares traded at Rs. 31.25

Since 20 market lots (2000 shares) have not been traded in the last 15 minutes, and 10 trades have not taken place during the last 30 minutes the weighted average price of all trades during the last 30 minutes is used as the official closing price for this scrip. This computation is shown below:

\[
\text{Official closing price} = \frac{(400 \times 32.50) + (300 \times 31.00) + (500 \times 32.00) + (200 \times 31.25)}{400 + 300 + 500 + 200} = Rs. 31.82
\]

The weighted average price of Rs. 31.82 is rounded off to the nearest tick, i.e. Rs. 0.25 for this price range, and therefore, the official closing price for this scrip would be taken as Rs. 31.75.
4.5 Order execution

4.5.1 Touchline

For a particular scrip, all jobber quotes from the jobber book would be sorted in order of price and timestamp as mentioned in Section 4.1.1. Similarly, all orders in the order book for that scrip would also be sorted in order of price and timestamp as mentioned in Section 4.1.2.

The touchline for a particular scrip would show the best bid/buy and offer/sell rates available in the market at that point in time, along with the depths available at those rates as mentioned in Section 3.4. In case bids or offers from more than one jobber form the touchline, then the revealed depths of all jobber quotes at the touchline price would be aggregated. Identification of all jobbers having quotes in the system would be available.

As far as orders are concerned, only the depth of the best buy and sell orders from the order book would be shown on the touchline, without any broker identification.

In case the best price from the order book is the same as the best quote in the jobber book, the aggregate of all revealed depths of the jobbers at that price and the quantity of the best order from the order book would form the touchline. It may be noted that there is no requirement that the touchline bid and offer should both be from the same trader in case the touchline is formed by jobber quotes.

<table>
<thead>
<tr>
<th>Jobber ID</th>
<th>Bid Revealed Depth</th>
<th>Bid Price (Rs.)</th>
<th>Offer Revealed Depth</th>
<th>Offer Price (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td>500</td>
<td>51.00</td>
<td>500</td>
<td>52.00</td>
</tr>
<tr>
<td>J2</td>
<td>200</td>
<td>50.00</td>
<td>1000</td>
<td>53.00</td>
</tr>
<tr>
<td>J3</td>
<td>400</td>
<td>51.00</td>
<td>800</td>
<td>53.00</td>
</tr>
</tbody>
</table>

In case there are no orders in the order book for this scrip, the touchline would be as follows:

(Example continued on next page)
(Example continued from previous page)

| TOUCHELINE | Best Bid/Buy | Best Offer/Sell |
| Depth      | Rate(Rs.)   | Depth          | Rate(Rs.)   |
| 900        | 51.00       | 500            | 52.00       |

Now, assume that with the above jobber book, orders for this scrip are received for this scrip in the order book as shown below:

| ORDER BOOK | Buy Quantity | Buy Rate (Rs.) | Sell Quantity | Sell Rate (Rs.) |
| 1000        | 51.00        | 400            | 50.50         |
| 200         | 51.00        | 600            | 51.00         |

The best buy order is at the rate of Rs. 51.00, while the best sell order is at the rate of Rs. 50.50.

For touchline, the best rates from both the books would be taken. On the bid/buy side, the best rate is Rs. 51.00, which is the same in both the books, whereas on the offer/sell side, the best rate is Rs. 50.50, which happens to be in the order book. The touchline would appear as follows:

| TOUCHELINE | Best Bid/Buy | Best Offer/Sell |
| Depth      | Rate(Rs.)    | Depth          | Rate(Rs.)    |
| 1900       | 51.00        | 400            | 50.50         |

On the touchline above, although the depths of all jobbers with the best bid rates have been aggregated, (i.e. 500 + 400), only the depth of the first best order, (based on timestamp) (i.e. 1000), is added to the touchline depth.

4.5.2 Matching logic

All incoming orders would first be matched against the best price available in the market. At the same price, a jobber's quote would get preference over standing orders in the order book. Therefore, at a given price, till the available depths of all jobbers quoting at the touchline price are exhausted, the incoming order cannot be matched against any standing order from the order book. The only way an order from the order book can be matched against an incoming order is by having a price better than the best quotes prevalent in the market at that point in time.
While matching against jobber quotes, the system provides for sharing of large orders among jobbers at the touchline price. This feature is referred to as rotation. In case more than one jobber exists at the touchline, and an incoming order that can be satisfied by the touchline price, having an order quantity greater than the revealed depth of the first jobber is received, order execution against the first jobber in the queue would proceed only to the extent of the revealed depth of this jobber, and the balance unexecuted order quantity would be matched against the next jobber in line to the extent of the second jobber's revealed depth, and so on, until all jobbers at the touchline price get one share of their revealed depths.

Even after this rotation, if the order has not been executed fully, the same set of jobbers at the touchline price would get their second share of the order, to the extent of their revealed depths. This would continue until the order is fully executed, or the available depths of the jobbers at touchline are exhausted. In case the order is still not fully executed, only then would the balance order get matched against the standing orders. It may be realised that whenever a touchline price changes, an order from the order book may reach the touchline, if its price is the best in the market at that point of time.

4.5.3 Trade confirmations

Every match that takes place between an order and a jobber's quote, or between two orders is deemed to be a trade or deal. All deals would be immediately confirmed to both traders involved on their TWS's or MCA's. In case a member has a printer connected to his TWS or MCA, he can also take a printout of the deal confirmation immediately. Members could view their confirmed deals for the day at any time.
MARKET INFORMATION

5.1 Private view

Each TWS user would have his own private view, which would not be available to any other user of the system. This view would consist of the following:

Quote/order status

Each trader would have full information on his quotes, including his multipliers and balance available depth. Jobbers would also be provided with information on their net open positions and break-even prices for each scrip in which they do jobbing.

Details of all orders, executed as well as unexecuted, existing in the order book would be available to the concerned brokers.

Trade status

Full trade details with counterparty identification, in the case of deals resulting from system executions, would be made available to the transacting parties.

For negotiated deals, trade details with an indication whether the same have been confirmed by the respective counterparties, would be provided on the TWS's of the concerned traders.

In the case of crossed traders, the system would return the trade duly timestamped.

Trade positions

Online information would be available to each trader on his trade positions. Where the member chooses MCA-based connectivity for his TWS's, one of his TWS's would display information such as, trades done by each one of his traders, his trade positions in various scrips (volume wise and amount wise), and the total exposure of his firm.

5.2 Public view

All users would receive information constituting the public view. This information is of two types:

Scrip-related

General information relating to price display and trade history for specific scrips would be made available.
The current touchline along with the associated jobber identification and depths for all quotes, would be displayed for every scrip. The multipliers and available depths, however, would not be revealed.

Information about the best buy and sell orders from the order book, along with their quantities, would also be furnished without disclosing the broker identification. The rest of the order book is not known to the market in general. History information, such as volume of trading in a scrip, quantity wise and amount wise, as well as details of the last trade (quantity and price), would also form part of the public view.

Market-related

Information relating to the market as a whole would constitute this category of public view. The following information would be available:

- ticker tape showing price and quantity for all trades
- BSE Sensitive and National Indexes
- company announcements and exchange news, as and when announced.
6. REGISTRATION OF MARKET PARTICIPANTS

6.1 Authorisation of Users (Members & Traders) Under BOLT & BACS

Once BSE membership rights have been conferred on an individual or a company and the necessary SEBI approval obtained, all the particulars about this member, including details of all his/its traders under BOLT, would be added to the membership database residing on the CTC.

A member would be entitled to [6] BOLT trader logins. He would be permitted to use these logins on upto [4] TWS's. A representative member, on the other hand, would get only [2] trader logins, which could be deployed on a maximum of [2] TWS's under the first connectivity option. The restrictions on the number of trader logins have been placed by the market and not by the system. The system is capable of giving any number of trader logins as may be required by a member.

6.2 Commencement of Trading

Once trading permission is granted and the TWS connectivity is finalized, a member can start trading on the BOLT system. The Central Computer would maintain members' logins, passwords and physical locations of TWS's.

6.3 Suspension/Expulsion and Reactivation of Member/Trader

The BSE Governing Board may decide to suspend or expel a member or trader for any of the following reasons:-

- Complicity in insider trading activity or for indulging in market irregularities.
- Adverse report received from the member's auditor.
- Receipt of a large number of complaints from investors/companies/other members/traders/SEBI etc.
- Violation of any law of the land.
- Voluntary closedown of business.
- The provisions related to capital adequacy requirements.
- Others as applicable by the rules, regulations & bye-laws.

The BSE Market Operations function under the BOLT system, could suspend/expell trading privileges for such a member. It could also reactivate the trading status of a suspended member who has fully complied with the penalties imposed.

The provisions related to margining (daily, settlement), as also monitoring of capital adequacy requirements, for members would be part of the BACS system.
7.

TRADING IN A SCRIP

It may be pointed out that tracking of a company's compliance with the pre-listing formalities is outside the scope of BOLT. It would, however, form part of the listing subsystem under BOIS.

Prior to any scrip being introduced for trading under BOLT, all pre-listing formalities specified by BSE must be completed by the issuing company. The BOLT system will upload company information with trading commencement date from the BOIS system.

7.1 Commencement of trading

Before the commencement date of trading, the company and security details, would be updated on the system. The following items are necessary to be maintained in the system:

**Scrub**

- Alpha Code
- Scrip Code
- Scrip Name
- Company Code
- Company Name
- Apply circuit breaker (Yes/No)
- Suspend scrip circuit breaker (percent)
- Floor Depth (minimum quantity - multiple of lot size)
- Ceiling Depth (maximum quantity - multiple of lot size)
- Market order protection (percent)
- Tick size
- Allowed price deviation (for warning circuit breaker)
- Commencement date for trading
- Face value per share
- Paid up per share
- Paid up value
- Market lot size
- Scrip Group (A, B1, B2, B3, D)
- Scrip Type (e.g., equity, bond)
- Trading status (active or suspended)
- Start suspend (date & time)
- End suspend (date & time)
- Reasons for suspending

All transactions that change the Listed Scrips Database will be time stamped and logged.
Trading in a scrip could commence the moment company and scrip details are recorded. However, with a view to streamline introduction of scrips, it is proposed to have only (2) days in a week, when scrips would be introduced for trading in the system. All members would be informed about the scrip introductions at least a week in advance. This broadcast message would be transmitted on daily basis.

7.2 Application of Circuit Breakers / Circuit Filters

Under BOLT it is proposed to have both Circuit Breakers as well as Circuit Filters.

Circuit Breakers
A circuit breaker is a real time surveillance tool to control excessive volatility in the market. A circuit breaker once applied to a scrip would stop trading in that scrip for a certain amount of time. One circuit breaker percentage would be defined for the market as a whole. Initially it may be set to [100%].

A deal that occurs at a price which is beyond the circuit breaker percentage would automatically trip the circuit in that scrip. The following would happen automatically without manual intervention when a deal trips the circuit in a scrip:
1. Cancell the last deal that tripped the circuit and inform both traders.
2. Stop trading in the scrip for [30 mins.]
3. Notify the market that the circuit breaker has been applied to that scrip.
4. Return all open transactions in that scrip and inform respective traders.

The circuit breaker would also be applicable on the movements of a broad-based index representing 'B' group trading activity. The deal that tripped the index would be cancelled and returned to the respective traders and the market would halt for the day. All traders would be informed immediately.

Circuit Filters
A circuit filter will operate differently from a circuit breaker. A circuit filter will not stop the market. For each scrip there will be a circuit filter flag which by default will be set to "YES". However, the market operations department will have the powers to change this flag for a scrip to "NO" if the filter is not to be applied to that particular scrip.

The circuit filter percentage could be defined differently for B1, B2 and B3 scrips. For computer deals validation against the circuit filter percentage would be done for all incoming quotes and orders. There would be two levels defined.
1. Warning Level - Once incoming quotes or orders cross this limit, messages would be sent to the surveillance department. However, the order/quote would not be rejected by the system and trading in that scrip would continue and there will be no impact on the rest of the market.

2. Filter Level - Incoming quotes or orders which reach this level would be rejected by the system and the respective traders informed. The surveillance department would also be informed.

Non Computer Deals would be allowed to be matched at levels beyond the circuit filter limits. However, the surveillance will be informed about such deals and appropriate action may be taken by them, if required.

7.3 Application of Trading Halt

Trading in a scrip/market would be halted due to following reasons. Detail description on each of them could be found in Annexure A.

- Non disclosure of information required under Listing Agreement
- Market Irregularities
- Compliants against a company
- Suspension of trading at regional Stock Exchange
- Abnormal Halt

However, it should be noted that BSE Executive Director has the power to halt the market at any point in time.
8. MANAGEMENT OF MARKET PARAMETERS

8.1 Scrip Categorization

The division of 'B' group scrips into different groups would be based on the volume and turnover of trading for the different scrips, review of which would be carried out once in [3] months. Not only could the BSE Market Operations function reclassify scrips into groups eg. B1, B2 & B3 based on fresh trading statistics, but could also change the number of scrips to be included in different 3 groups.

8.2 Tick Size Determination

The tick sizes would be different for individual scrips. However, broadly it can be classified under different price ranges which could be modified by BSE market operations functions from time to time.

8.3 Floor and Ceiling Depths for Quotes

Depending upon the circumstances prevailing in the market at any point of time, the BSE Market Operations function could alter the floor and ceiling depths for quotes. These alterations would be carried out before commencement of trading on any given day and would remain unchanged for the rest of the day.

8.4 Floor Quantities for Non Computer Deal

For non-computer deals, flexibility to vary the minimum quantity accepted by the system beyond the [1] market lot proposed initially would exist.

8.5 Market Order Protection

It would be possible for the Trader to change the market order protection percentages for the B1, B2 and B3 categories. In addition, it would also be possible for them to change the treatment meted to the balance unexecuted order quantity, viz., automatic insert in the order book or return to the trader.

8.6 Market Timings

Under normal circumstances, the market would open and close for the different sessions as indicated in Sections 2.1 and 2.2. However, under extra-ordinary circumstances, the presence or otherwise of these sessions, as well as the start and end times for the same, could be changed by the Market Operations function.
9. DISSEMINATION OF MARKET ANNOUNCEMENTS

9.1 Entry of Information

BOLT system would have a facility to broadcast market-related information in real time mode, if so desired by the BSE Market Operations function. Broadcast messages could broadly be classified into following major heads:

- Company announcements
  - Right/Bonus issue
  - Dividend declaration
  - Board meeting dates
  - Mergers/amalgamations etc.
  - Decision of any court affecting the company, positive or negative
  - Decision of any governmental, agency affecting the company.
  - Conversion of debentures
  - New listings

- BSE Bulletin information
  - Ex-right/Ex-bonus date
  - Cum-dividend/Ex-dividend
  - Book closure/Record date
  - Settlement program of BSE
  - BSE free format Text
  - Scripwise no delivery period announcement
  - Badla Information
  - Transfer deed acceptance

- PTI information
  - Major PTI news
  - Quotes from the other major SE's of the country

- Market information
  - Online price movement of stocks
  - Scripwise daily, monthly, yearly high/low prices.
  - Top gainers and top loosers
  - Scripwise last trade price.
  - Price movement feed to Reuters OnLine.

The system would be based on the choice exercised by the BSE Market Operations user, accept the above market related information. For entry of company news the system would accept information obtained from devices like scanners, fax machines etc. so that very little time is lost in data entry of price-sensitive information. All information entered in the system could be assigned a priority, which would be used for ordering information dissemination.
9.2 Dissemination of Information

After entry of information is complete, the user would specify whether this information should be disseminated instantaneously (as for example, information received and entered during market hours) or allowed to be batched up.
ANNEXURE 'A'

Non disclosure of information required under Listing Agreement

Companies listed at BSE are required to sign a listing agreement which stipulates the following conditions:

- Timely disclosure of any change in its capital structure, due to the listing of rights, bonus, conversion of debentures, conversion of warrants, mergers etc.
- Timely payment of listing fees.
- Timely announcement of audited/unaudited yearly/half yearly results.
- Disclosure of information relating to rights, bonus dividend, record date/book closure date, conversion of debentures, important Board decisions having a material impact on scrip price movements.
- Applicability of Clauses 40a and 40b relating to takeovers and acquisitions.

In case any company fails to comply with one or more of the above requirements, then BSE listings department could suspend trading in the particular company or scrip.

Market Irregularities

Abnormal price movements, price discontinuities, circuit breaker alarms, volume spurts, large deals, etc., could point to market irregularities indulged in by market participants. While the database and software enabling investigation of such irregularities would be maintained on BARE (BSE Automated Regulation Environment) for the currency of any settlement, the BOIS system would hold information for (6) months.

Once investigation by the Market surveillance department proves irregularities in the market, the concerned company(ies) and/or member(s) could be suspended from trading further under the BOLT system.

Compliants against a company

BSE Investor Services cell receives different types of compliants, many of which are against companies. Such compliants could originate from investors members, government authorities or public interest organizations.
If a company is at fault for any reason, then the system would persist
suspension of trading for this company until a definite date or further
notice.

Suspension of trading at another Stock Exchange

Trading in a company and/or scrip could be suspended at BSE, if trading in
that company and/or scrip is suspended at the regional stock exchange for
that company.

Abnormal Halt

In addition the reasons cited above, BSE could halt trading in a scrip, a
company or the whole market if it receives extraordinary news which could
have serious ramifications in the market. Events such as, fire, blasts, acts
of arson, war, etc. could be considered under this category. A major
computer system failure would also be included under this category.

Trading halts would be initiated by the concerned BSE administrative
function. In other words, the Listing function would activate trading halt
for reasons explained in Section 7.3.1, the Market Surveillance function for
reasons stated in Section 7.3.2, the Investor Services cell for reasons
mentioned in Section 7.3.3 and the Market Operations function for Section
7.3.4. Abnormal hold would be triggered only by the BSE Executive
Director.