

Xetra<sup>®</sup>

Release 3

Member Simulation Guide

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## **1 Introduction**

### **1.1 Purpose**

This document describes the approach for Xetra<sup>®</sup> Release 3 simulation. It provides key dates and planning considerations for the preparation activities the members need to complete in order to successfully participate in Xetra<sup>®</sup> Release 3 simulation.

Only the adherence to the prescribed time table and routines can assure that members can successfully start production on October 12, 1998. Slippage in the successful execution of the simulation parts jeopardizes the participation of the respective member from the first day of production.

Additions and further details will be provided in due time.

### **1.2 Intended Audience**

This document is a guide for the members' project coordinators responsible for coordinating the introduction of Xetra<sup>®</sup> Release 3. Obviously, various member departments are involved in the effort for Xetra<sup>®</sup> Release 3 simulation, such as:

- Trading (bond and equity)
- Settlement and other back-office functions
- IT department
- Network operations (WAN and LAN)
- Organizational department
- Relevant departments in the member's clearing bank
- Vendors - if desired.

The number of tasks to be performed prior to and during Xetra<sup>®</sup> Release 3 simulation will require discipline on the members' as well as on Deutsche Börse's side to be executed successfully. We recommend that this document and the included checklists are communicated as soon as possible within the members' project teams and beyond to the line organizations where applicable. All parties involved must be aware of their tasks and their dependencies before the actual start of simulation.

In addition to the tasks to be performed by all members the specific preparations to be performed by new members and those using Xetra<sup>®</sup> Order Routing SNA or acting as Betreuers are described in separate paragraphs. These are only relevant for the respective members. For the majority of members the tasks given at the beginning of the respective section will be sufficient.

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**2**

**Summary**

Xetra<sup>®</sup> Release 3 simulation consists of three parts with increasing availability of functionality to facilitate Deutsche Börse's and members' step-by-step preparation:

- Simulation Part 1  
Xetra<sup>®</sup> Release 3 with restricted functionality
- Simulation Part 2  
Xetra<sup>®</sup> Release 3 with full functionality
- Simulation Part 3  
Xetra<sup>®</sup> Release 3 with production schedule.

The three parts of Xetra<sup>®</sup> Release 3 simulation build up on each other, participation in each is mandatory.

For each of the parts the members need to meet certain entry criteria to participate, one of them being the successful participation in the preceding part. The members proceed over the sequence of parts ultimately into production. Checklists provided in this document shall guide the members in adequately preparing for the different parts of simulation.

The Xetra<sup>®</sup> project team will provide dedicated support to the members to facilitate successful participation in the simulation parts. Members can reach the Xetra<sup>®</sup> Project team with their questions and comments regarding simulation using the familiar help desk numbers:

Deutsche Börse Technical Helpdesk Xetra<sup>®</sup>

- Telephone: ++49-69-2101-8400
- Fax: ++49-69-2101-8401

Hours: 6:00 - 20:00 (working days)

Deutsche Börse Xetra<sup>®</sup> Trading Helpline

- Telephone: ++49-69-2101-1400
- Fax: ++49-69-2101-1401
- Hours: 7:30 - 18:00 (working days)

Additionally, support in installation questions is provided on the weekend preceding the start of production (October 10 and 11, 1998) by the Technical Helpdesk Xetra<sup>®</sup>.

The key account managers assigned to the members are available for support throughout simulation.

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### **3 Objectives of Xetra® Release 3 Simulation**

Xetra® Release 3 will extend the current system to support order driven wholesale trading, retail trading and OTC trading of equities, bonds and warrants. Additional liquidity may be provided by the Betreuer by responding to quote requests and using quote functionality. The purpose of Xetra® Release 3 simulation is to provide an opportunity for Deutsche Börse and its members to become familiar with the new and changed functionality as well as the new instrument types (i.e., bonds and warrants) and to install and test their technology and business procedures prior to production.

To create this opportunity, the key objectives of Xetra® Release 3 simulation are as follows:

- Early problem identification on both sides (member and Deutsche Börse)

Members are strongly encouraged to participate actively in all parts of simulation from the beginning.

Simulation provides a production-like setting and by an early and frequent participation of the members and all involved departments within Deutsche Börse, problems in the infrastructure, business operations or system operations can be identified early and resolved before entering production.

- High quality simulation

Through periods of concentrated simulation activity with early involvement of Deutsche Börse line representatives (e.g., Market Supervision, Technical Helpdesk, Systembereich I, Systembereich II, Related Systems) a high quality simulation will be enabled.

In addition, special functional and technical features provided with Xetra® Release 3 to some members, i.e., Betreuer functionality and Order Routing SNA, are addressed specifically within simulation.

- Special support of new members

Members who will start trading in Xetra® with the production start of Xetra® Release 3 will be led through individual slots to achieve technical and functional connectivity to the Xetra® Back End prior to participation in the production-like trading simulation.

- Member preparation focussing on new functionality

This will be enabled by granting access to the new functionality in stages and through simulation focus days which will support the members in practicing the skills required to master the new / changed functionality. Moreover, scripts providing usability guidelines help to ensure familiarization with the new functionality.

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- Risk minimization of Xetra® Release 3 introduction to production

This will be achieved by setting up production-like functional reference data in the Xetra® Release 3 simulation environment and by requesting members to prepare their functional settings (user set-up, instrument group definitions, instrument group assignments, resource access levels, profiles) according to their production needs. This simulation-proven data will be used to set up Xetra® Release 3 production. Additionally, members will be given the opportunity to gather experience regarding installation procedures.

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## 4 Approach to Xetra® Release 3 Simulation

This section describes the approach chosen for Xetra® Release 3 simulation. It contains an overview of the major changes compared to Xetra® Release 2 simulation and explains the Release 3 simulation model with the planned simulation parts. Furthermore, all major tasks required for the preparation and execution of Xetra® Release 3 simulation will be presented in a high level schedule and the detailed Xetra® Release 3 simulation calendar will be introduced (chapter 8)

### 4.1 Changes Compared to Xetra® Release 2 Simulation

Based on the experience gained during Xetra® Release 2 simulation and due to the changed conditions for Xetra® Release 3, the simulation approach has been adapted accordingly.

- Introduction of simulation focus days

Most simulation days will focus on some special aspect of the new functionality (e.g., Betreuer, OTC trade entry, bonds). Questions related to the focus of the day will be treated with higher priority by the help desks. Specialists for the selected focus topic from the Xetra® project team will be available on-site at the Xetra® Trading Helpline as second level support.

However, these focus topics are a service offer with focus specific guidance by the simulation scripts and focus specific priority support by the help desk which may not be relevant to every member. On every simulation day, members are free to define their own focus and simulate every functionality available during the respective simulation phase.

As in Xetra® Release 2 simulation, month end and year end processing will be part of Xetra® Release 3 simulation.

- Further improved simulation scripts

The simulation scripts will be structured by simulation date to facilitate access to the relevant pages for each day. They will contain focus-oriented activity recommendations, usability guidelines and additional user support (e.g., references to supporting information, list of related reports).

- Further improved simulation schedule

As in Xetra® Release 2 simulation, Xetra® Release 3 simulation activities will be restricted to two to three days per week and a few hours per day to concentrate participants' attention and to enable liquidity and interaction. This has already been proven to be a successful concept.

For Xetra® Release 3 simulation, there will be a consistent weekly schedule per simulation part (e.g., simulation on Mondays and Thursdays, or on Mondays, Wednesdays and Fridays). Simulation on Saturdays will be avoided if at all possible.

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Daily simulation hours will be extended as Xetra® Release 3 introduction to production approaches to cater for members' increasing need for simulation time. During the last part of Xetra® Release 3 simulation, the production schedule will be employed so that all time-dependent processes (e.g., time-triggered instrument state transitions) can be prepared for production on the members' as well as on Deutsche Börse's side.

- Extended „real-life“ trading in simulation

For Xetra® Release 3 simulation, there is no need for an overall slot approach for technical or functional integration, as the majority of members have already built the necessary knowledge with Xetra® Releases 2 and 2.1. Because of this, more simulation time is available for „real“, production-like trading. Only in the special case of Xetra® Order Routing SNA there will be integration slots during part 1 of simulation. For new members or new MISS installations individual slots will be scheduled as needed during regular simulation hours (refer to the simulation calendar in chapter 8).

However, to avoid any restrictions on the other participants, no instruments will be reserved for exclusive usage by members.

## 4.2

### Simulation Model

For Xetra® Release 3 simulation, a staged approach has been chosen. There will be three parts of simulation with increasing availability of functionality to facilitate Deutsche Börse's and members' step-by-step preparation:

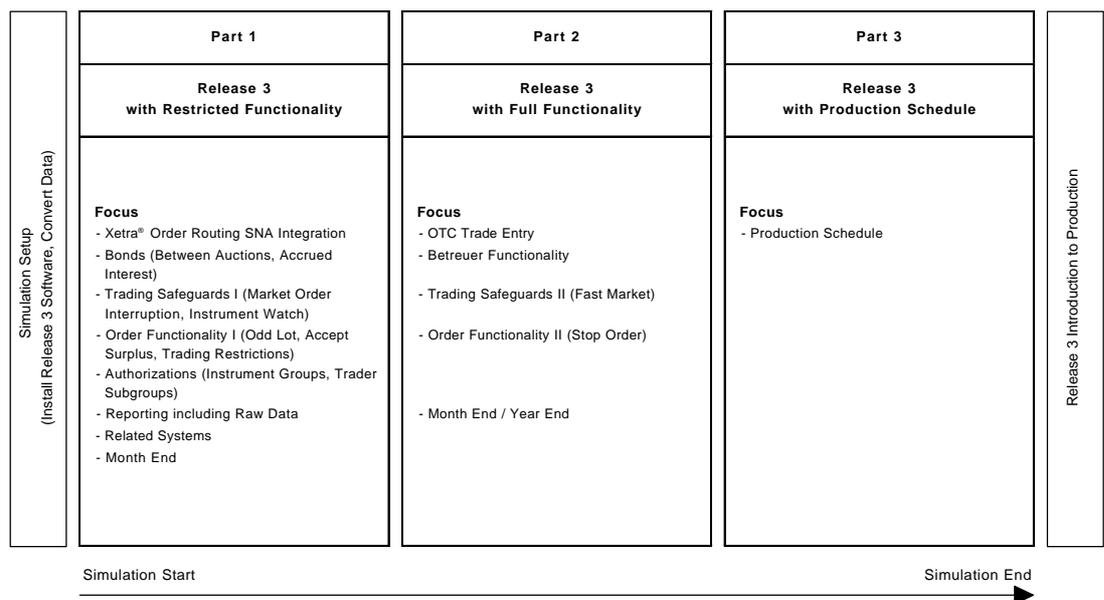


Figure 4.1: Xetra® Release 3 Simulation Model

The characteristics of these three parts are described in section Description of the Simulation Parts.

**4.3**

**Simulation Schedule**

The following simulation schedule gives a high level overview of the major tasks and milestones related to preparation and execution of Xetra® Release 3 simulation and their chronological order:

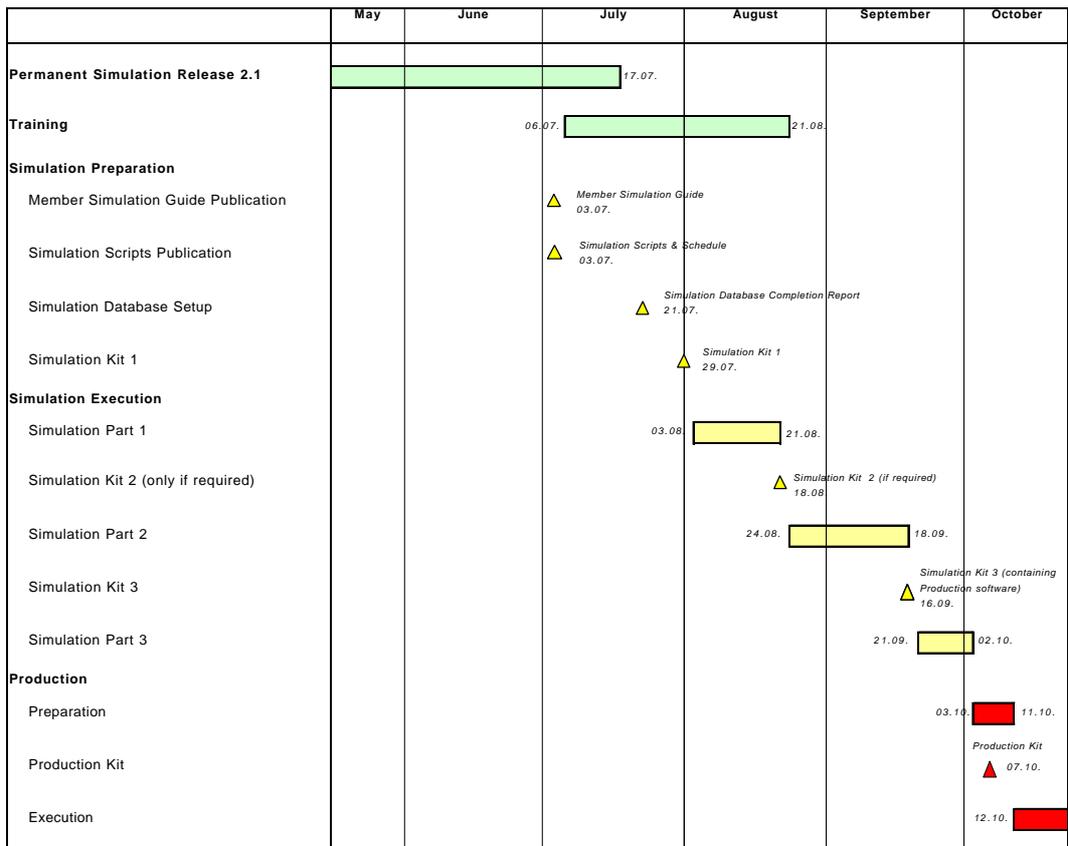


Figure 4.2: Xetra® Release 3 Simulation Schedule

**4.3.1**

**Permanent Simulation Environment**

The permanent simulation environment for Xetra® will be used for the productive Xetra® Release 2.1 Software until July 17, 1998. From Saturday, July 18, 1998 the environment will not be accessible as it is being prepared for Xetra® Release 3 simulation which will begin on August 3, 1998.

Shortly after the production start of Xetra® Release 3 on October 12, 1998 the permanent simulation environment will be made available again running Xetra® Release 3. The exact date will be communicated in due time.

#### **4.3.2 Training**

Technical and functional train-the-trainer training on Xetra<sup>®</sup> Release 3 will be provided to members from July 7 through August 21, 1998.

As communicated before, the following training sessions are available, with the full training courses intended for users new to the functionality and the update training courses pertaining to users who already participated in Xetra<sup>®</sup> Release 2.1 production:

- Equity Full-Training
- Equity Update-Training
- Bond Full-Training
- Technical Full-Training
- Technical Update-Training.

The members are responsible for registering for the training sessions, registration will have to be completed by July 12, 1998 and will be monitored by Deutsche Börse.

The training at the members' should be scheduled as early as possible in the simulation time frame to maximize the use of time available for simulation. Depending on the functionality used by the member the training can take place in part 1 and/or part 2 of simulation.

Training will be carried through using the train-the-trainer approach, i.e., one to two employees per member will attend and will educate the other users in their institution.

#### **4.3.3 Production**

Xetra<sup>®</sup> Release 3 production will start on October 12, 1998.

The production kit for Xetra<sup>®</sup> Release 3 will be delivered to the members via file transfer on the evening of Wednesday, October 7, 1998. The kit installation can start after the files produced by end-of-day processing in the Xetra<sup>®</sup> Back End have been received on the evening of Friday, October 9, 1998. Installation support will be provided by Deutsche Börse on Saturday, October 10, and Sunday, October 11, 1998 from 9:00 to 17:00 h CET.

#### **4.3.4 New Members**

Members who have not previously participated in Xetra<sup>®</sup> trading and who intend to start their participation with the introduction of Release 3 on October 12, 1998 must start to participate actively in simulation by August 20, 1998 the latest. That means that by this date they must have successfully passed technical/functional integration and the security administrator must have maintained the resource access levels as needed.

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## **5 Description of the Simulation Parts**

### **5.1 General Considerations**

Xetra® Release 3 simulation will focus on the usage of the system in a production-like setting. This is valid from day 2 of simulation for the majority of members who already use Xetra® Release 2.1 in production.

From day 2 of simulation, August 6, 1998, all participants simulate in a common market and need to exercise the due discipline as in production. Deutsche Börse will monitor to ascertain that all participants will act responsibly in their trading so that there is no interference with the intention of simulation and no disadvantage for other participants.

The respective business operations organizations of Deutsche Börse like Market Supervision will participate in all parts of simulation.

Throughout all parts of simulation for Xetra® Release 3, traders in equities, bonds and warrants and the IT department as well as the respective back-office departments of the members will be included.

All relevant related systems of Deutsche Börse (e.g., TPF, BOEGA, BASIS, Xetra® Observer, BOSS CUBE, KUSTA and WSS) will be active in all simulation parts.

### **5.2 General Information**

- Participation in Xetra® Release 3 simulation is mandatory. Deutsche Börse will support this concept by appropriate measures, e.g., by tracking simulation participation and following up with those members who do not actively participate.
  - As a general rule, Xetra® Release 3 simulation kits will be distributed via network. This is also true for the production kit.
  - All kits must be installed as prescribed by Deutsche Börse. Failure to install the kit in time will result in the inability to access the back end already running on the next version.
  - From mid July to end of October 1998, the permanent simulation environment will be used exclusively for Xetra® Release 3 simulation. During that time, it will not be available for Xetra® Release 2.1 permanent simulation nor any other activities not directly related to Xetra® Release 3 simulation. This approach will avoid coordination conflicts due to the usage of the same resources. Furthermore, it will help to ensure that the data which will be set up during Xetra® Release 3 simulation to be used as initial Xetra® Release 3 production data does not become involuntarily changed or corrupted. The availability of the permanent simulation environment for Xetra® Release 3 will be announced in time after production start.
  - Only production-relevant scenarios will be simulated during Xetra® Release 3 simulation. In particular, this means that members will have to use the member IDs and user IDs which they will also use in Xetra® Release 3 production.
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- Due to simulation environment specifications, there will be no high volume days in Xetra® Release 3 simulation.
- The user data, respective resource access levels and passwords will be copied from the productive Xetra® Release 2.1 data base prior to the start of Xetra® Release 3 simulation. During simulation, members have the opportunity - and the duty -
  1. to check the user data copied from production and update it as required according to the new Authorization Concept;
  2. to set up new user data for bond traders.
- The user data for the start of production of Xetra® Release 3 will be copied from the Xetra® Release 3 simulation environment. The members are urged therefore to maintain this data with due diligence.
- Xetra® Release 3 provides reports in two formats, as print files and as raw data reports. All reports will be automatically selected at the beginning of simulation and will be delivered to the member at the end of the business day. Generally, reports are delivered to the respective member MISS. However, two raw data reports (Daily Trade Information, Fee per Executed Order) can be sent to the designated service provider of the member. This must be requested at the Xetra® Trading Helpline.
- Members can simulate Xetra® Order Routing via VALUES API during the whole Xetra® Release 3 simulation. However, no specific simulation scripts are provided, as this is just another usage of the amply documented VALUES API interface. The available scripts can be used as a basis for the respective simulation activities.

### 5.2.1

#### **Betreuer Functionality**

- Simulation of the Betreuer functionality is a prerequisite for Betreuer admission. Deutsche Börse will monitor the simulation activities of prospective Betreuers.
  - Deutsche Börse declares a member to be a Betreuer in a specific instrument, after the member made an application for getting this status. Not every member will be a Betreuer during simulation (for details on the admission process refer to the 'Betreuer Guide'.
  - During part 2 and 3 of Xetra® Release 3 simulation the simulation of the Betreuer functionality will especially take place on the respective focus days provided in the simulation calendar. Further information is delivered to the members in the document 'Member Simulation Scripts'.
  - Administration of Betreuer specific resource access levels is performed by Market Supervision at Deutsche Börse. Additionally, the members' security administrators must set up the users accordingly.
  - Questions concerning Betreuer functionality will be answered by the Xetra® Trading Helpline.
  - To be a Betreuer at production start of Xetra® Release 3, members have to submit their Betreuer applications by August 31, 1998.
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## 5.2.2

### **Xetra® Order Routing SNA**

- All members who want to use Xetra® Order Routing SNA in production are required to participate successfully in Xetra® Order Routing SNA simulation. Deutsche Börse will stay in contact with members to ensure their successful participation.
- Only production relevant scenarios will be simulated during simulation regarding Xetra® Order Routing SNA. In particular, this means that only the special IDs ("ORS001" and "ORS002" for each member) that are needed for Xetra® Order Routing SNA will be set up for simulation.
- The authorization of the members for Xetra® Order Routing SNA will follow the authorization concept for production.
- The respective simulation scripts for Xetra® Order Routing SNA are provided with the document 'Member Simulation Scripts'.
- As simulation environment for Xetra® Order Routing SNA, IMS27 (not IMS29) will be used. As a prerequisite for simulation participation members / vendors should be able to connect to IMS27. Connection to the BOSS CUBE host can be tested until July 27, 1998. Password and user ID are identical to IMS29.

## 5.3

### **Part 1: Xetra® Release 3 with Restricted Functionality**

### 5.3.1

#### **Description**

In the initial part, members will have the first opportunity to experience the enhanced and new features of Xetra® Release 3. During simulation preparation, the required data will be set up by Deutsche Börse by converting Xetra® Release 2.1 production data, providing default values for new options (e.g., instrument groups, new resource access levels) and adding Xetra® Release 3 instruments.

New or modified features that will be available during simulation and will be addressed in the focus day scripts of simulation part 1 include:

- Xetra® Order Routing SNA
  - Bonds
  - Trading safeguards
    - Instrument watch
    - Market order interruptions
  - Order functionality
    - Odd lot orders (retail trading)
    - Accept surplus orders
    - Mass order management
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- Instrument states
  - Order book balancing
  - Time triggered instrument state transitions
- Authorizations
  - Instrument groups
  - Trader subgroups
- Reporting including raw data.

Furthermore, a month end will be simulated to enable the rehearsal of related processes and the creation of monthly reports.

Additionally, simulation slots for the technical and functional integration of Xetra® Order Routing SNA members will be provided. The same applies to new members and new MISS installations.

To support a step-by-step introduction to the changes and additions of Xetra® Release 3, the following areas will not be available / not be simulated during part 1:

- OTC trading
- Betreuer functionality
- Fast market
- Stop orders.

### 5.3.2

#### **Specific Considerations and Additional Information**

- If new MISS installations are used, it is required that prior to participation in this phase the member has successfully completed the technical integration test.
  - Simulation part 1 will be based on simulation kit 1. This kit will be delivered via file transfer on July 29, 1998. Installation and configuration by the members are mandatory.
  - Installation and configuration instructions will be provided with the simulation kit 1. Installation support will be provided by the Technical Helpdesk Xetra® during regular hours.
  - Note that the default settings defining the colors of the work space for Xetra® Trader will differ from the production settings. This is to minimize the risk of confusing the simulation with the production environment. Of course, the indication of the environment will also be given in the window titles as usual.
  - Simulation part 1 should be used as an opportunity for the members to provide “in-house”, hands-on training for their personnel. To facilitate participation of the involved groups, trading in simulation will mainly take place after productive trading hours.
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- On the first day of simulation, August 4, 1998, the members' security administrators of the members need to ascertain that their user data was correctly transferred from production. The data must be maintained using the new Authorization Concept to reflect the new instrument definitions and resource access levels. Additionally, they must enter and maintain the data of the newly set up bond traders. Only after those tasks have been performed can regular trading in simulation start on August 6, 1998. Note that the profile data of the user data copied from Xetra® Release 2.1 gets lost in the process due to the structural changes in the Authorization Concept.
- Between July 10, 1998 and August 02, 1998 during the simulation database set-up and testing, any user set-up made by the members in Xetra® Release 2.1 production will not be taken into account for the simulation database.

### 5.3.3 **Betreuer Functionality**

Betreuer functionality is not enabled in simulation part 1.

### 5.3.4 **Xetra® Order Routing SNA**

In this part of the simulation, the members will have the first opportunity to experience the new Order Routing functionality via SNA. In general, simulation participation is possible on every given simulation day. However, to enable dedicated support and supervision of individual members by Deutsche Börse regarding Xetra® Order Routing SNA, time slots will be assigned during this simulation part.

To provide sufficient support for all members during the technical and functional integration of Xetra® Order Routing SNA the number of members which receive dedicated support will be restricted to 6 - 8. A time slot with this dedicated support lasts three hours.

After members have participated in the integration of Xetra® Order Routing SNA, they will have the opportunity to use the remaining simulation days for their own purpose.

We strictly recommend that members participate successfully in the slots before they make use of the remaining days for their own purpose.

The following tasks are mandatory during the integration of Xetra® Order Routing SNA:

- Order entry via the members' Order Routing Management Systems both for Xetra® and BOSS CUBE
  - Receipt of order confirmations and execution confirmations.
-

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The following tasks are recommended to be performed in addition to the mandatory tasks:

- Order deletion / modification
- Simulation of event messages, on August 13, 1998, Market Supervision will invoke instrument suspension and instrument halt
- Order entry via VALUES API front end application during the emergency process of Xetra<sup>®</sup> Order Routing SNA (e.g., failure of the MISS, the switch or the converter)
- Simulation of error handling caused by false order entry / modification / deletion
- Development and execution of own, member specific simulation scripts.

#### 5.3.4.1

##### **Special Guiding Principles for Part 1:**

- On each defined simulation day for Xetra<sup>®</sup> Order Routing SNA one slot with dedicated support for a specified group of members will be executed. It begins at 12:00 and ends at 15:00.
  - Members have the opportunity to simulate Xetra<sup>®</sup> Order Routing SNA on all simulation days. However, Deutsche Börse strongly recommends that they have successfully participated in integration for Xetra<sup>®</sup> Order Routing SNA prior to this.
  - The members' key account manager will contact the members to set up the slots for the Order Routing SNA tests. Each slot will last three hours. It is recommended that the slots should be executed as soon as possible within the simulation time frame to maximize the time remaining for further tests or possibly required further development on the members' side.
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5.3.4.2

**Simulation Calendar for Order Routing SNA**

Planned completion date for connectivity BOSS CUBE: July 27, 1998.

Part 1: Xetra® Release 3 with Restricted Functionality							
	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.
	3. Aug.	4. Aug.	5. Aug.	6. Aug.	7. Aug.	8. Aug.	9. Aug.
Hours	09:00 - 15:00	12:00 - 15:00		12:00 - 15:00			
Focus	Connection Test	Xetra® Order Routing SNA Integration Slot		Xetra® Order Routing SNA Integration Slot			
	10. Aug.	11. Aug.	12. Aug.	13. Aug.	14. Aug.	15. Aug.	16. Aug.
Hours	12:00 - 15:00			12:00 - 15:00			
Focus	Xetra® Order Routing SNA Integration Slot			Xetra® Order Routing SNA Integration Slot			
	17. Aug.	18. Aug.	19. Aug.	20. Aug.	21. Aug.	22. Aug.	23. Aug.
Hours	12:00 - 15:00			12:00 - 15:00			
Focus	Xetra® Order Routing SNA Integration Slot			Xetra® Order Routing SNA Integration Slot			

Figure 5.1: Simulation Calendar Order Routing SNA

5.4

**Part 2: Xetra® Release 3 with Full Functionality**

5.4.1

**Description**

In the second part of Xetra® Release 3 simulation, the functionality which was not available during part 1 will be accessible and constitute the topics for the focus days.

Additionally, year end processing will be performed.

## 5.4.2 Specific Considerations and Additional Information

- Simulation part 2 is either based on simulation kit 1 or on simulation kit 2. If an update of the kit is required, simulation kit 2 will be delivered via file transfer on August 18, 1998. Note that the installation of the kit can only proceed after the end of simulation on August 20, 1998.
- In simulation part 2 Betreuer functionality will be simulated for the first time and is covered in the respective scripts for the focus days. The members that have registered to act as Betreuers during simulation should refer to the specific information provided. However, members not acting as Betreuers are strongly encouraged to use these focus days actively as well. Intense participation is a prerequisite for the simulation of the interaction between quotes requested and quotes provided by Betreuers in a production-like manner.
- Simulation part 2 is the final opportunity for the members to provide in-house, hands-on training for their personnel. To facilitate participation of the groups involved, trading in simulation will mainly take place after productive trading hours.

## 5.4.3 Betreuer Functionality

Betreuer functionality is available in part 2 of simulation for Xetra® Release 3 for the first time. While the focus days will concentrate on the use of Betreuer functionality, the functionality can also be simulated at the other simulation days.

## 5.4.4 Order Routing SNA

There will be no special time slots with dedicated support for Xetra® Order Routing SNA in this part of simulation. The functionality can be simulated on all simulation days regardless of the focus of the day. It is recommended that members pay special attention to the functionality that was not available during simulation part 1, e.g., stop market orders.

## 5.5 Part 3: Xetra® Release 3 with Production Schedule

### 5.5.1 Description

Simulation during part 3 will be performed using a Xetra® Release 3 simulation kit which will contain the production software. The full Xetra® Release 3 functionality again will be available. Furthermore, the production schedule will be employed for all simulation days so that all time-dependent processes (e.g., time-triggered instrument state transitions) can be prepared for production and simulated accordingly.

All changes that have been applied to the simulation environment as exceptions to the rule of being as production-like as possible (additional member and user IDs for simulation purposes, volatility ranges, simulation Betreuer rights, etc.) will be revoked before this part to reduce the risk of Xetra® Release 3 introduction to production. Vendor IDs will not be valid in simulation part 3.

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## 5.5.2

### **Specific Considerations and Additional Information**

- Key objective of simulation part 3 is to demonstrate production readiness of the Xetra® Release 3 system, the members' organizations and processes and integrated system environments in a production-like environment. During simulation part 3, not only the full range of Xetra® Release 3 system functions and the members' infrastructure and systems can be simulated, organizational readiness and the adequacy of the business processes and operations shall be verified as well (e.g., settlement, etc.).
  - During this simulation phase the database used will most closely resemble the production database.
  - Simulation part 3 will be executed on basis of simulation kit 3 which contains the production version of the software. The kit will be delivered on the evening of September 16, 1998 and must be installed in due time for the connection test scheduled for September 21, 1998.
  - For simulation part 3, no specific scripts will be provided. All simulation days are free focus days, giving members the opportunity to repeat any focus topic of special interest to them or to select their own emphasis.
  - It is highly recommended that the members complement the scripts provided by the Xetra® project team by internal business procedures covering all of the members' involved organizational entities.
-

**6 Member Activity Plan and Simulation Success Criteria**

The members' activities during Xetra® Release 3 simulation were first outlined in the document 'Member Activity Plan for Release 3' delivered to the members in April 1998. The 'Member Simulation Guide' details simulation related activities. Additionally, complementary information on simulation preparation will be delivered to the members on an as-needed basis using the usual communication means of circulars with attached documents and storage on Xetra® online.

For each of the simulation parts, tasks for preparation and execution of simulation are required from both sides, the members and Deutsche Börse. In the following sections, these activities are listed. The detailed timelines specify key-dates which build the framework for the members' detailed planning for the preparation and execution for each of the simulation parts.

Entry criteria for participation in a specific simulation phase are generally:

- Successful execution of the preceding simulation part
- Successful and timely completion of the preparation activities specified for the respective simulation part.

It is the responsibility of the member to meet these entry criteria. Whenever a member identifies risks or problems meeting the entry criteria in a timely manner, it is strongly recommended that the member informs the respective key account manager so that adequate responses/solutions can be found cooperatively.

**6.1 Simulation Part 1**

**6.1.1 Detailed Timeline**

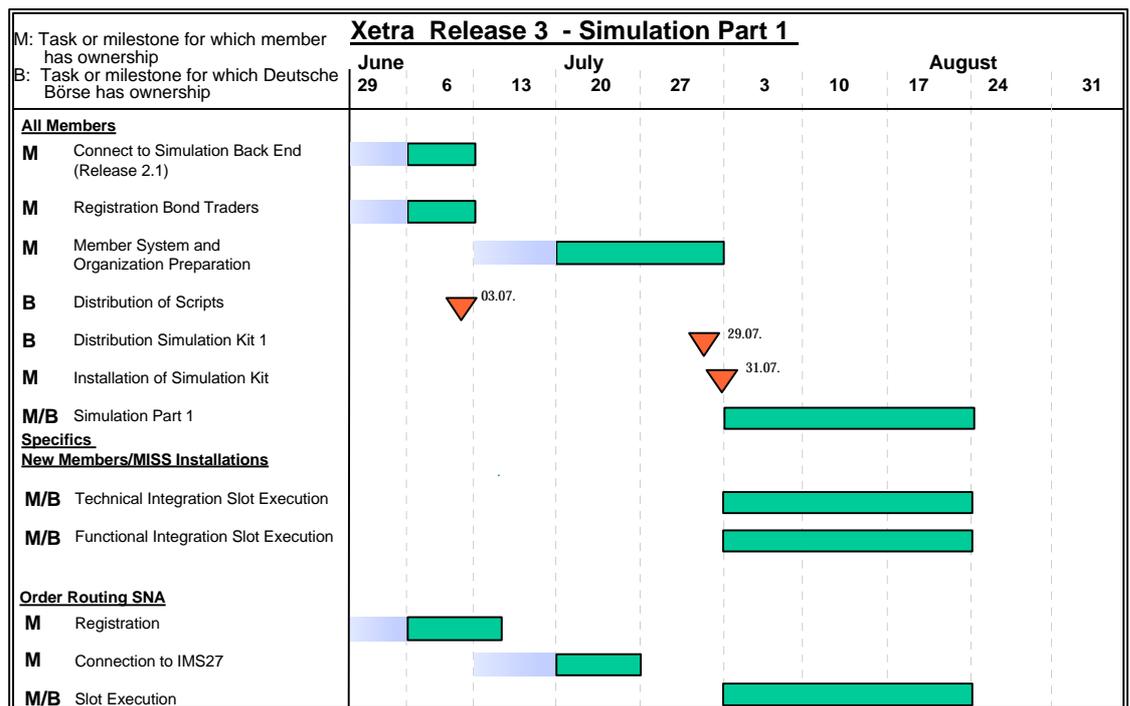


Figure 6.1: Detailed Timeline Simulation Part 1

## 6.1.2 Preparation Activities

The following readiness checkpoints must be fulfilled by the different member groups prior to entering into simulation part 1. For the specific activities to be performed by the members who act as Betreuer or who will use the Order Routing SNA functionality refer to the respective attachments.

### 6.1.2.1 All Members

- Training slots for technical and functional “train-the-trainer” training allocated.
- Resources for timely installation of simulation kit 1 identified and secured.
- Xetra® Release 3 simulation kit 1 received and installed.
- Self-developed or 3<sup>rd</sup> party software ready, if its usage is intended.
- Related in-house systems set up to simulate subsequent processing.
- Resources for participation in simulation part 1 on the simulation days specified in the simulation calendar (chapter 8) identified and secured.
- Member specific simulation objectives and scenarios - if desired - defined and details synchronized with the simulation scenarios and scripts provided by Deutsche Börse.
- Member internal problem management process and organization established.

### 6.1.2.2 New Members and New MISS Installations only

- MISS, workstation and network infrastructure established.
- Self-developed or 3<sup>rd</sup> party software ready.  
Note: For initial script execution, usage of Xetra® Trader is mandatory. Upon successful simulation with Xetra® Trader, self-developed and 3<sup>rd</sup> party software can be included in the simulation.
- Slot for technical/functional integration confirmed with Deutsche Börse.
- Resources for execution of slots identified and secured.
- Contact to respective key account manager established.
- New members who intend to start trading in Xetra® on October 12, 1998 need to successfully complete technical/functional integration during simulation part 1.

### 6.1.2.3 Xetra® Order Routing SNA

- Set up user IDs ORS001 and ORS002 for Order Routing.
  - Perform instrument assignment for user IDs ORS001 and ORS002.
-

**6.2 Simulation Part 2**

**6.2.1 Detailed Timeline**

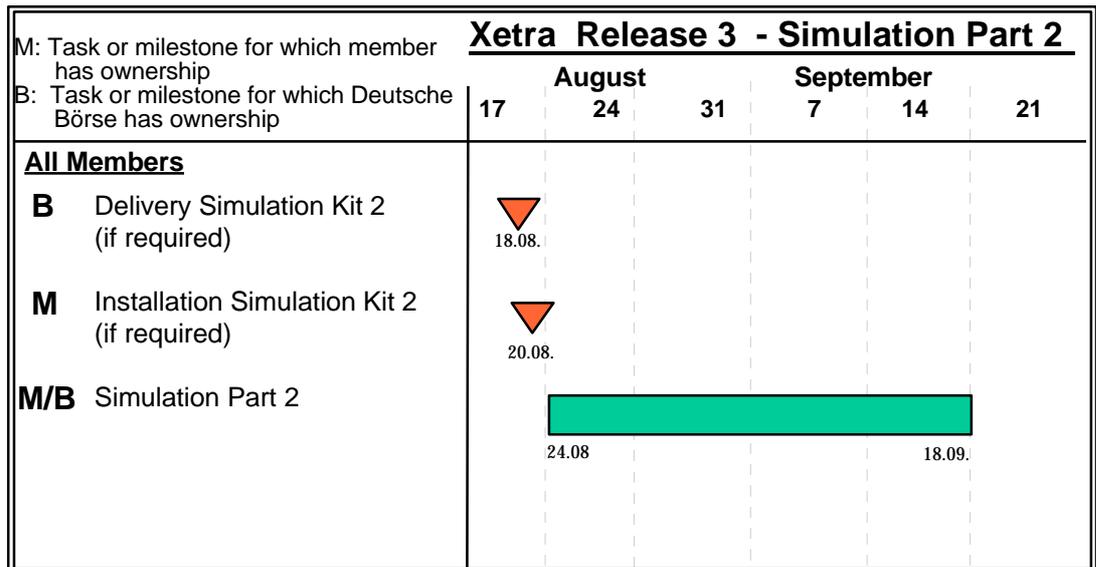


Figure 6.2: Detailed Timeline Simulation Part 2

**6.2.2 Preparation Activities**

The following readiness checkpoints must be fulfilled by all members prior to entering simulation part 2:

- Resources for timely installation of simulation kit 2 (if required) identified and secured.
- Simulation kit 2 received and installed (if required).
- Resources for participation in simulation part 2 on the simulation days specified in the simulation calendar (chapter 8) identified and secured.
- Train-the-trainer workshops completed.
- In-house training scheduled and started such that it will
  - allow adequate participation during simulation, and
  - be widely complete prior to production start.
- Member specific simulation objectives and scenarios - if desired - defined and details synchronized with the simulation scenarios provided by Deutsche Börse.
- Member internal problem management process and business and operations organization established.

**6.3 Simulation Part 3**

**6.3.1 Detailed Timeline**

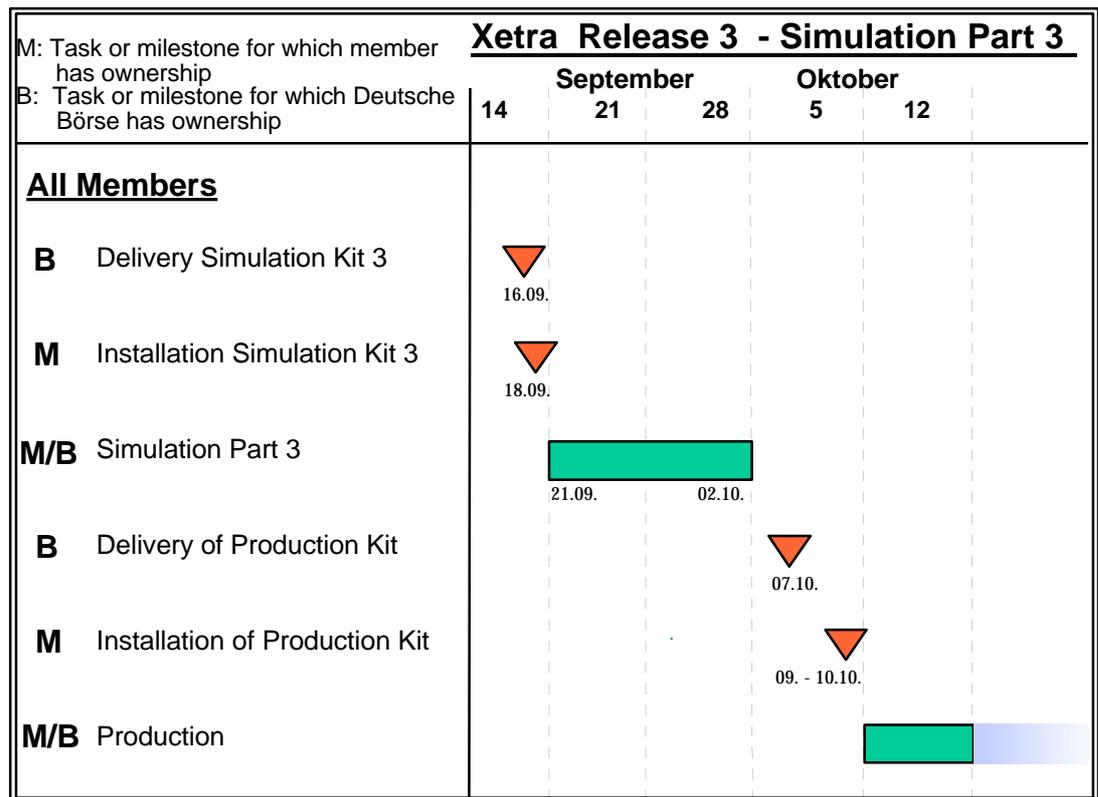


Figure 6.2: Detailed Timeline Simulation Part 3

**6.3.2 Preparation Activities**

The following readiness checkpoints must be fulfilled by all members prior to entering simulation part 3:

- Resources for timely installation of simulation kit 3 identified and secured.
- Simulation kit 3 received and installed.
- Resources for participation in simulation part 3 at the simulation days specified in the simulation calendar (section 8) identified and secured.
- In-house training completed.
- Member internal business processes designed and organizational changes - if any - implemented.
- Member specific simulation objectives and scenarios - if desired - defined and details synchronized with the simulation scenarios and scripts provided by the Xetra® project.
- Member internal problem management process and business and operations organization established.

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**7 Simulation Readiness Assessment**

**7.1 All Members**

The parts of simulation build upon each other. The following table shows the dependencies from left to right. The completion of each phase is mandatory before entering the next part.

Simulation Part 1	Simulation Part 2	Simulation Part 3	Production
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As the connection between the members' simulation environment and the Xetra® simulation back end already has been established previously, no preparation work is necessary for those members who already participated in Xetra® Release 2.1 production. The member proceeds through the parts of simulation into production.

If a member encounters any problems in keeping the schedule, we urge you to inform the respective key account manager immediately and in advance of the realization of the problem.

**7.2 New members and New MISS Installations only**

Preparation for simulation requires additional steps in the case of new members. Incidentally, the same applies to the setup of new locations, i.e., a new MISS installation for existing members. The technical line connection must be established and the installation must be checked (in the so-called technical and functional integration slots) prior to participation in simulation.

Both slots take place during simulation part 1 within the regular simulation hours as given in the simulation calendar.

The scheduling of the individual slots will be initiated by the Technical Helpdesk Xetra®.

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MISS-AP (Access Point) Line Test	Simulation Part 1  Technical/ Functional Integration	Simulation Part 2	Simulation Part 3	Production
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For technical/functional integration, slots are assigned to members. During this slot time, the respective member will have a dedicated expert on the phone guiding member personnel through the simulation script and resolving issues directly whenever possible. In these cases, the expert will call the member in advance to confirm the slot. On the day of slot execution the contact will be initiated by the contact person of Deutsche Börse.

**8**

**Simulation Calendar**

The simulation calendar presented below covers all three parts of Xetra® Release 3 simulation and has been developed using the following guiding principles:

- Xetra® Release 3 simulation should provide approximately the same number of simulation hours as Xetra® Release 2 full simulation.
  - Between two simulation days, there should be at least one day of downtime for necessary activities both for the Xetra® project team at Deutsche Börse and the members (report verification, adaptation of processes, fixing of errors, etc.).
  - The simulation calendar needs to take into account contingency days and an extended downtime before Xetra® Release 3 production start for preparatory activities.
  - To encourage member participation, to enable intensive Deutsche Börse support and to avoid confusion of simulation and production environments, it is necessary to carry out simulation as intensively as possible outside of normal trading hours, preferably in the late afternoon. However, this does not apply for connection tests and Xetra® Order Routing SNA slots.
  - The business dates of the simulation days as well as detailed information will be delivered to the members along with the document 'Member Simulation Script and Schedule'.
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8.1

**Simulation Calendar Simulation Part 1**

Part 1 - Release 3 with Restricted Functionality							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
Kit	<b>3. Aug</b> R3 Simulation Kit 1	<b>4. Aug</b> R3 Simulation Kit 1	5. Aug	<b>6. Aug</b> R3 Simulation Kit 1	7. Aug	8. Aug	9. Aug
		12:00 - 15:00 Xetra® Order Routing SNA Slots		12:00 - 15:00 Xetra® Order Routing SNA Slots			
Hours	09:00 - 15:00	16:00 - 19:00		16:00 - 19:00			
Focus	Connection Test	Authorizations		Order Functionality I			
Special							
Kit	<b>10. Aug</b> R3 Simulation Kit 1	11. Aug	12. Aug	<b>13. Aug</b> R3 Simulation Kit 1	14. Aug	15. Aug	16. Aug
	12:00 - 15:00 Xetra® Order Routing SNA Slots			12:00 - 15:00 Xetra® Order Routing SNA Slots			
Hours	16:00 - 19:00			16:00 - 19:00			
Focus	Retail Trading			Bonds			
Special							
Kit	<b>17. Aug</b> R3 Simulation Kit 1	18. Aug	19. Aug	<b>20. Aug</b> R3 Simulation Kit 1	<b>21. Aug</b> R3 Sim. Kit 2 (*)	<b>22. Aug</b> R3 Sim. Kit 2 (*)	23. Aug
	12:00 - 15:00 Xetra® Order Routing SNA Slots			12:00 - 15:00 Xetra® Order Routing SNA Slots			
Hours	16:00 - 19:00			16:00 - 19:00	09:00 - 15:00		
Focus	Trading Safeguards I			Reporting including Raw Data	Connection Test	Contingency for Connection Test	
Special	Month End						

(\*) if required

Figure 8.1: Simulation Calendar Part 1

8.2

**Simulation Calendar Simulation Part 2**

Part 2 - Release 3 with Full Functionality							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	<b>24. Aug</b>	25. Aug	<b>26. Aug</b>	27. Aug	<b>28. Aug</b>	29. Aug	30. Aug
Hours	16:00 - 19:00		16:00 - 19:00		12:00 - 15:00		
Kit	R3 Simulation Kit 2		R3 Simulation Kit 2		R3 Simulation Kit 2		
Focus	Betreuer Functionality & Trading Safeguards II		OTC Trade Entry		Free Focus		
Special							
	<b>31. Aug</b>	1. Sep	<b>2. Sep</b>	3. Sep	<b>4. Sep</b>	5. Sep	6. Sep
Hours	16:00 - 19:00		16:00 - 19:00		12:00 - 15:00		
Kit	R3 Simulation Kit 2		R3 Simulation Kit 2		R3 Simulation Kit 2		
Focus	Order Functionality II		Bonds		Free Focus		
Special							
	<b>7. Sep</b>	8. Sep	<b>9. Sep</b>	10. Sep	<b>11. Sep</b>	12. Sep	13. Sep
Hours	16:00 - 19:00		16:00 - 19:00		12:00 - 15:00		
Kit	R3 Simulation Kit 2		R3 Simulation Kit 2		R3 Simulation Kit 2		
Focus	Betreuer Functionality & Trading Safeguards II		Contingency Focus Day		Free Focus		
Special					Month & Year End		
	<b>14. Sep</b>	15. Sep	<b>16. Sep</b>	17. Sep	<b>18. Sep</b>	<b>19. Sep</b>	20. Sep
Hours	16:00 - 19:00		16:00 - 19:00		12:00 - 15:00		
Kit	R3 Simulation Kit 2		R3 Simulation Kit 2		R3 Simulation Kit 2	R3 Sim. Kit 3 (**)	
Focus	Reporting including Raw Data		Order Functionality I & II		Free Focus	Contingency for Connection Test	
Special							

(\*\*) contains Release 3 Production software

Figure 8.2: Simulation Calendar Part 2

8.3

**Simulation Calendar Simulation Part 3**

Part 3 - Release 3 with Production Schedule							
	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	<b>21. Sep</b>	<b>22. Sep</b>	23. Sep	<b>24. Sep</b>	25. Sep	26. Sep	27. Sep
Hours	09:00 - 15:00	07:30 - 17:10		07:30 - 17:10			
Kit	R3 Sim. Kit 3 (**)	R3 Simulation Kit 3		R3 Simulation Kit 3			
Focus	Connection Test	Free Focus		Free Focus			
Special		Production Schedule		Production Schedule			
	28. Sep	<b>29. Sep</b>	30. Sep	1. Oct	2. Oct	3. Oct	4. Oct
Hours		07:30 - 17:10					
Kit		R3 Simulation Kit 3					
Focus		Free Focus					
Special		Production Schedule					

(\*\*) contains Release 3 Production software

Figure 8.3: Simulation Calendar Part 3

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**Additional comments:**

- Every evening after simulation hours, both a Xetra® and a BOEGA batch run will take place.
  - Interfaces with related systems (e.g., TPF, BOEGA, BASIS, Xetra® Observer, BOSS CUBE, KUSTA and WSS) are part of the daily simulation activities.
  - Xetra® Order Routing SNA will be available from the very beginning of simulation part 1 (August 03, 1998).
  - On free focus days, members can either repeat any focus topic that they take interest in or select their own focus.
  - The contingency focus day can either be used as a free focus day or be dedicated to a focus topic to be determined as the need arises.
  - On connection test days, members will have the opportunity to test their new installations. They will be able to login, receive news messages to verify their public broadcast receipt, and logout. All instruments will remain in the instrument state START, so that no trading will be possible.
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