

1 Status Nord Pool Spot

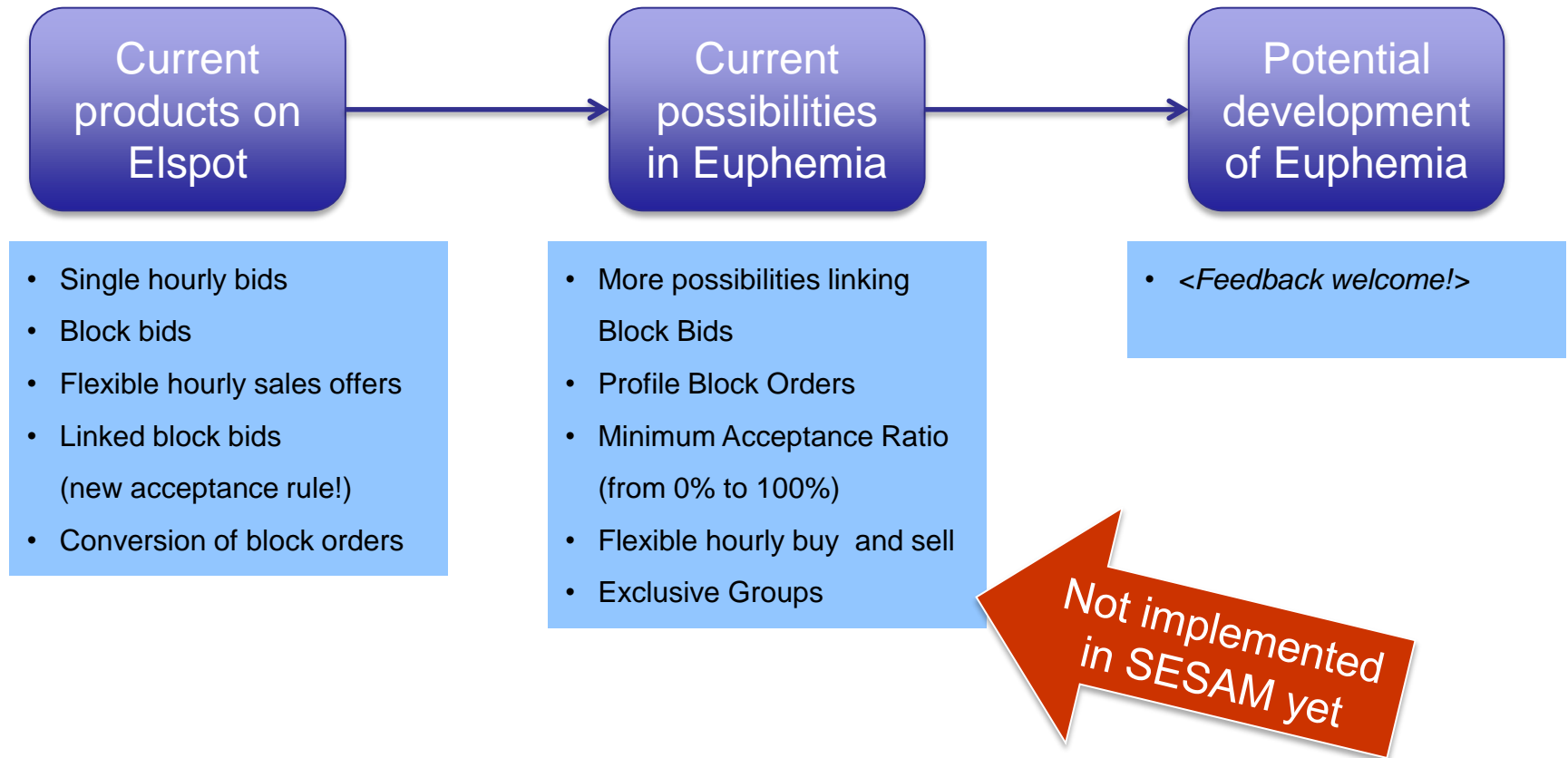
News

- 2014 omsatte NPS över 500 TWh
361 DA Nordic/Baltics
5 ID Nordic/Baltics
136 UK
- Italien och Slovenien kommer med i PCR 24 februari dock utan kapaciteten mot Schweiz (EU-förhandlingar) och Grekland (ej tekniskt färdiga i Italian Boarders Market Coupling Project)
- PCR används för 75 % av Europas konsumtion och 4M Market Coupling (är dock ej sammankopplat med övriga västeuropa)

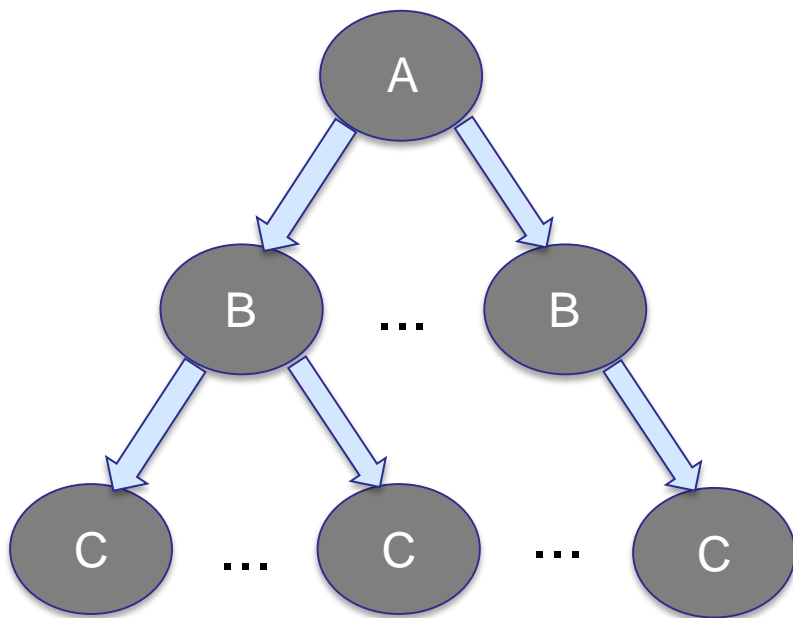
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DEVELOPMENT OF DAY AHEAD PRODUCTS - ELSPOT

Stages of Elspot trading products development



More possibilities for linking Block Bids



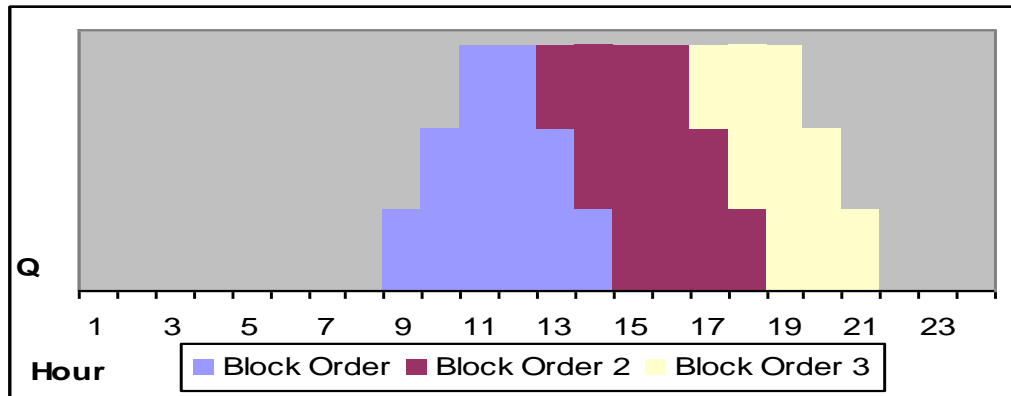
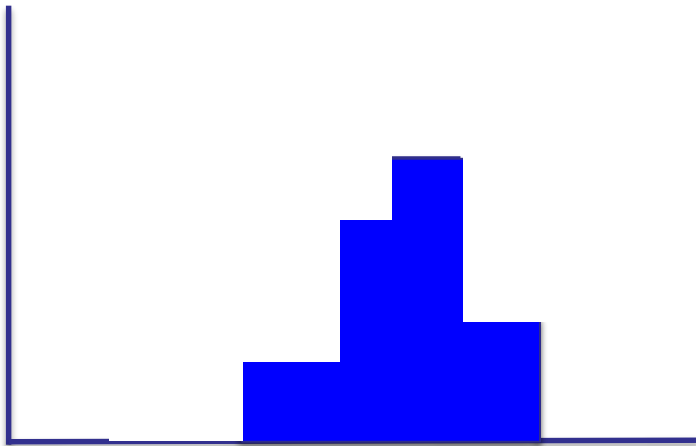
A - Parent
B - Child
C - Grandchild

Today Blocks can be linked but are limited to a single Parent – Child – Grandchild relationship.

Possibilities in Euphemia:
More linking levels, more blocks.
Testing needed to see if performance allows this.

Acceptance criteria in more complex trees to be documented.

Profile Block Order



A profile block order is a regular block order where user can define the **volume to be different in each period** over the entire time span of the block.

Profile block orders can also be linked.

Minimum acceptance ratio (Curtable block order)

- Curtable blocks allow block orders to be partially filled according to a user-defined minimum curtailment ratio
 - A block with minimum curtailment ratio of 1 (100%) is said to be fill-or-kill: it might only be fully accepted or fully rejected.
 - A block with a minimum curtailment ratio of 0.5 (50%) may be curtailed up to 50%.
 - A block with a minimum curtailment ratio of 0 (0%) is fully curtable.

Flexible hourly offers

- Block order with a fixed price limit, a fixed volume, minimum acceptance ratio of 1, with duration of 1 hour
- User does not set the actual hour of delivery, the algorithm determines it according to welfare maximum
- Same product as before, except with Euphemia, this can be either sell or **buy**

Exclusive Groups

- The exclusive group is a cluster of buy and/or sell blocks which are entered with varying volumes, prices, and periods, and out of which only one block can be activated
 - It is not possible to link a block to a block which is part of an exclusive group.
 - Using Exclusive groups, users can create much additional flexibility for block orders.
 - If the exclusive group consists of curtailable blocks, the maximum sum of acceptance ratio cannot exceed one.

Exclusive Groups example

- Four blocks in an exclusive group (two 4h blocks and two 6h blocks), all with minimum curtailment ratio of 100%
- The four different blocks span different periods and they can have different order prices and volumes.
- Out of these four, the block generating the maximum social welfare will be accepted

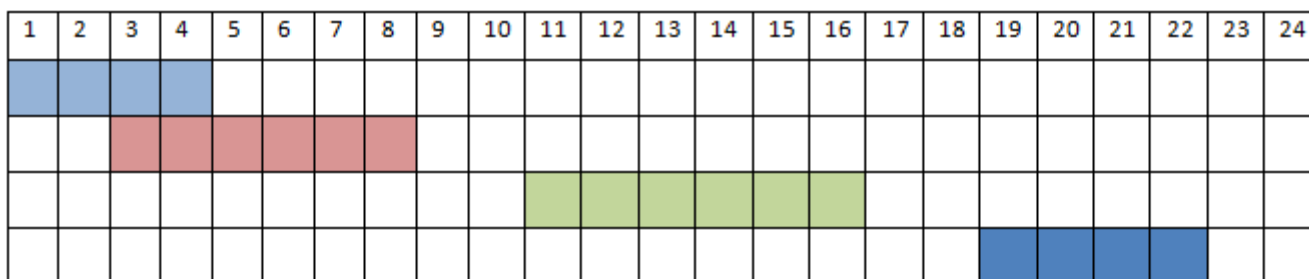
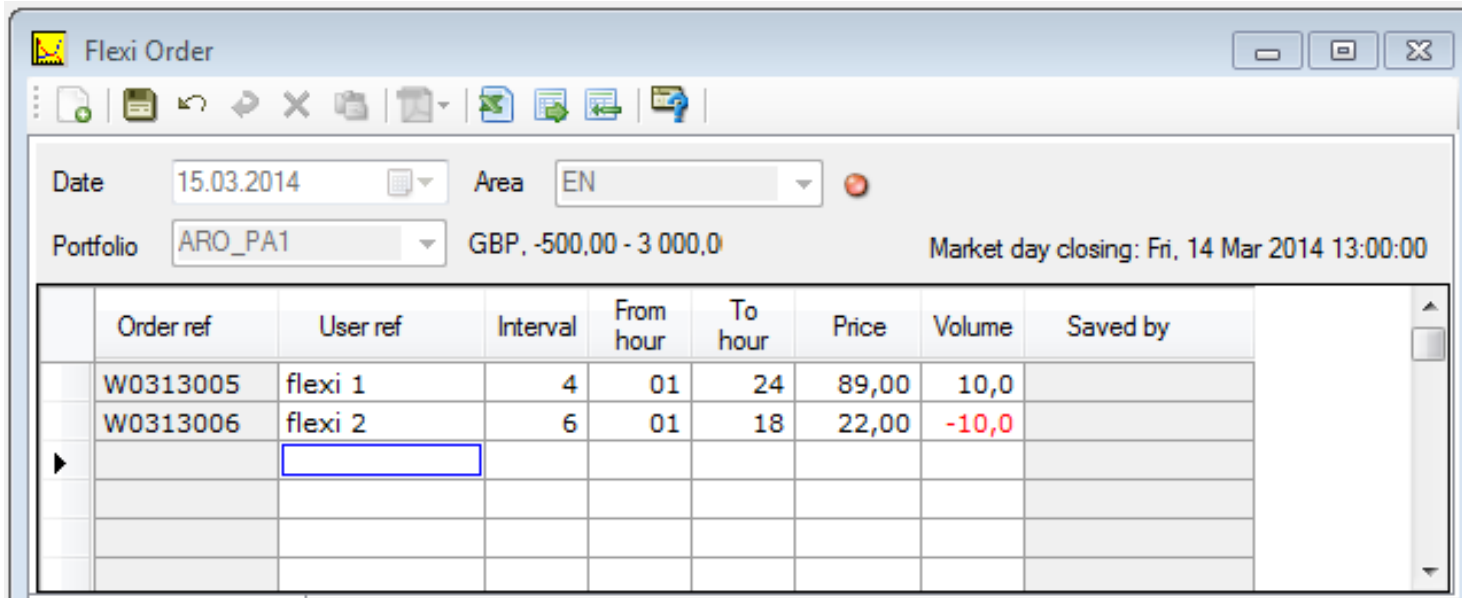


Figure 2: Illustrates an exclusive group of four different blocks. There are two 4h blocks and two 6h blocks spanning over different periods.

N2EX implementation: "Flexi Orders"



The screenshot shows a software window titled "Flexi Order". At the top, there is a toolbar with various icons. Below the toolbar, the interface includes several input fields and a table. The "Date" field is set to "15.03.2014", the "Area" is "EN", and the "Portfolio" is "ARO_PA1". The "GBP, -500,00 - 3 000,0" range is displayed, along with the "Market day closing: Fri, 14 Mar 2014 13:00:00". The main part of the window is a table with the following data:

	Order ref	User ref	Interval	From hour	To hour	Price	Volume	Saved by
	W0313005	flexi 1	4	01	24	89,00	10,0	
	W0313006	flexi 2	6	01	18	22,00	-10,0	
▶								

- "Flexi Order" is a flexible block order with user-defined duration, price, volume, and time limits – but not with specific timing.
- This has been requested from NPS by various members.
- N2EX implementation is based on the above user interface, which then generates Exclusive groups to reach the desired functionality

N2EX implementation: "Flexi Orders"

Block\Hour	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
block 1	■																							
block 2		■	■	■	■																			
block 3			■	■	■	■																		
block 4				■	■	■	■																	
block 5					■	■	■	■																
block 6						■	■	■	■															
block 7							■	■	■	■														
block 8								■	■	■	■													
block 9									■	■	■	■												
block 10										■	■	■	■											
block 11											■	■	■	■										
block 12												■	■	■	■									
block 13													■	■	■	■								
block 14														■	■	■	■							
block 15															■	■	■	■						
block 16																■	■	■	■					
block 17																	■	■	■	■				
block 18																		■	■	■	■			
block 19																			■	■	■	■		
block 20																				■	■	■	■	
block 21																					■	■	■	■

From the "Flexi Order" defined by the user, the trading system creates an Exclusive Group covering all possible periods of the day.