

BoF-PSS2

Situation today

Bank of Finland
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Bank of Finland
PAYMENT AND SETTLEMENT SYSTEM SIMULATOR

BoF-PSS2 Distribution (August 2011)



The Eight full year of BoF-PSS2

- 84 granted licenses in August 2011
 - 61% in central banks, 25% in academic institutions, the rest in ACH's, CSD's, ECB, BIS, ...
- Several introductory training courses were organised in Helsinki
- Production version 3.0 was released
 - Software is available as research tool free of charge
 - Visit www.bof.fi/sc/bof-pss
- Use of TARGET2 simulator has started
- 9th simulator seminar for the user community is here today!



Active interest in the use and development of the simulator continues

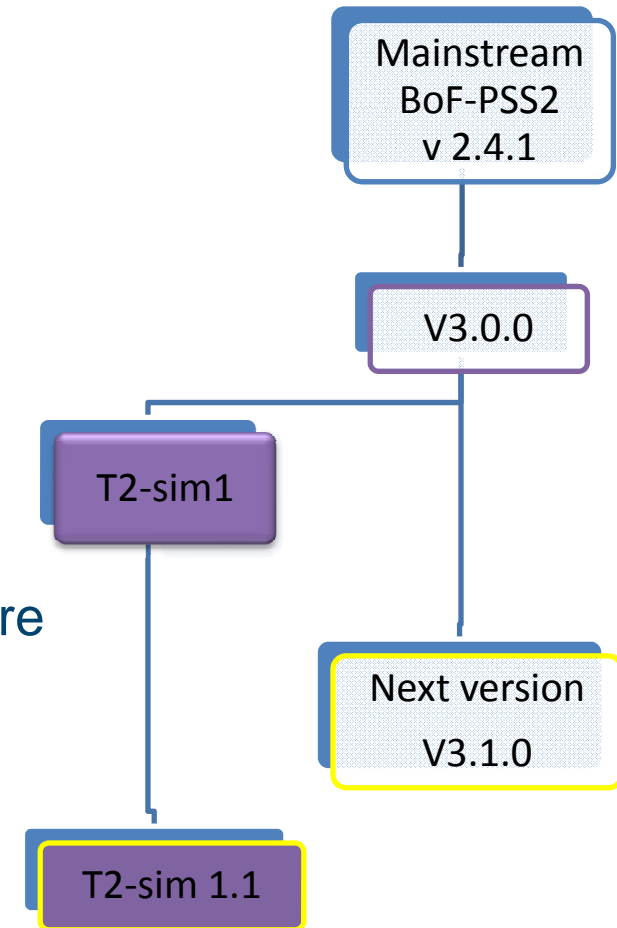
The European focus: TARGET2 simulator



- Dedicated tool developed for overseers and operators of TARGET2 system
 - Replicates genuine features of TARGET2's settlement process
 - Uses detailed transaction level data set of whole TARGET2 system
 - Used remotely from secure and centralized facility
- Jointly provided by Deutsche Bundesbank, Banque de France, Banca d' Italia and Bank of Finland

BoF-PSS2 in TARGET2 simulator

- Separate T2-simulator software
 - Specific algorithms and processes
 - Partially closed source code due to IPR
 - Available only in T2-simulator
- ...based on new version of mainstream BoF-PSS2
 - Foundations for the specific features were implemented in the generic and non restricted simulator
- Developments in either version may benefit both



Features released in version 3.0

Facilities implemented to support

...simulation of liquidity reservations

- Imports, exports, statistics and data structures in simulations

...simulation of timely parallel events

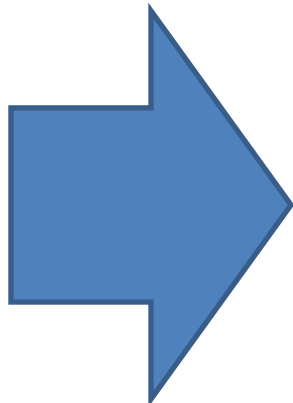
- Calibration for the duration of e.g. algorithm runs
- Time estimation algorithm type

...new system event handler algorithm type

- Allows system dependent event processing rules in simulation

New features in version 3.0.0 continued

- Generalised system setup possibilities
 - Multiple algorithms of same type are allowed
 - Different parameterization for same logic intraday, intracycle, ...
- Updated database structure
- Process log database table
 - Recording of simulation execution details
- Performance improvements
 - Faster processing due to multithreading of DB processes
 - Lower memory consumption
- Microseconds in time labels (0.000001 sec steps)



Big potential for new features to be used and more widely implemented in mainstream BoF-PSS2

Ongoing development

- Version 3.1.0 of generally available simulator
 - Credit cap features
 - Extends the bilateral limit functionalities and algorithms
 - Allows an *upper limit* to be set for position bilaterally or multilaterally
 - Credit caps are known to be used e.g. in Euro1 system
 - Development project is sponsored by EBA Clearing
 - Command line interface improvements
 - Final testing of the version is ongoing
- TARGET2 simulator project



Organisation and idea of user support

- Help the users of the BoF-PSS2 to get the best possible benefit from the tool
- Allow BoF to accumulate sufficient knowledge and pool of experts capable of providing such support

The screenshot shows a web browser window titled "BOF Extranet - Help desk and Advisory service - Microsoft Internet Explorer provided by Suomen Pankki". The address bar shows the URL "https://extranet.bof.fi/bofpss2/HelpDesk/Pages/Default.aspx". The page content includes a header with the Bank of Finland logo and "BEACON" branding. A navigation menu has "Help Desk" selected. Below the menu, there are links for "New Request", "News Listing", and "Tutorials". A "Help desk and Advisory service" section contains a welcome message and a "New Request" button. A table of requests is visible, with columns for Title, Request Date, and Request Status. A "BEACON BULLETIN" is also displayed, dated May 2010, with the text "The BEACON BULLETIN May 2010 SUPPORTING SERVICES".

BoF Simulator development team

- Development of the simulator, support and analysis work
- Over 15 years of working experience on quantitative tools for analysis of payment and settlement systems
- Academic experience in economics, operation research, computer science and physics



Matti



Kasper



Tatu



*Ongoing co-operation with original
developers of BoF-PSS2*

Looking forward

- Development and support of BoF-PSS2 and T2-simulator will continue
- Training courses and support for user community
- Proceedings publication from the 2009-2011 seminars
 - Call for chapters DL is set to 1 December 2011
- Focus points of further development of BoF-PSS2
 - Improvements in usability and transparency of basic tool
 - Adding novel analysis methods to the toolbox: ABM, enhanced network analysis tools...



***Feedback from users and joint projects
will steer the development***

Thank you!

