

The 2014 Edition of BSF4ooRexx (for Windows, Linux, MacOSX)

<http://sourceforge.net/projects/bsf4oorexx/files/>

The 2014 International Rexx Symposium



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Agenda

- Purpose of BSF4ooRexx
- Changes to BSF4ooRexx since Aruba-Symposium
- Changes to the upcoming 2014 version of BSF4ooRexx
- Roundup and outlook

Purpose of BSF4ooRexx, 1

- Java
 - Available on practically all computers
 - Java's runtime environment (JRE)
 - A huge class library, available for all operating systems
 - Java classes (and programs) run everywhere, even GUIs !
 - Practically every relevant software problem/challenge solved
 - Constantly updated to the latest technologies
 - Used for
 - Java applets running in web browsers
 - Used for stand-alone, fully fledged professional applications

Purpose of BSF4ooRexx, 2

- BSF4ooRexx
 - Make all of Java (classes and the runtime) available to ooRexx
 - Instead of Assembler or C(++) external function libraries for special needs, *all of Java is made available as a huge external function (and class) library!*
 - One size fits all ;-)
 - No need anymore to create separate external function libraries for specific functionality one is seeking!
 - *Make it easy* for ooRexx programmers to take advantage
 - *Camouflage all of Java as ooRexx !*

Purpose of BSF4ooRexx, 3

- BSF4ooRexx
 - ooRexx code can be even used instead of Java code!
 - Interface methods
 - Often used for callback functionality, e.g. in Java GUI classes
 - Abstract methods
 - Java/NetRexx code can control invocation of Rexx scripts
 - Allows ooRexx to be used as a macro language for Java apps!
 - Can create and use arbitrary many ooRexx interpreter instances
 - Can interact with individual ooRexx objects
 - Send oo-Rexx messages with or without arguments
 - Fetch return values from ooRexx scripts

BSF4ooRexx Since the Aruba Symposium

- Rexx exits and Rexx command handlers
 - Allow to implement Rexx exits in Java/NetRexx/BSF4ooRexx
 - RXOFNC, RXEXF, RXFNC, RXCMD, RXMSQ, RXSIO, RXNOVAL, RXVALUE, RXHLT, RXTRC, RXINI, RXTER
 - Allow to implement Rexx command handlers in Java ...
 - BSF4ooRexx samples
 - samples/Java/handlers/exitHandlers
 - samples/Java/handlers/commandHandlers
- ➔ Cf. 2013 International Rexx Symposium

Changes to the upcoming 2014 version of BSF4ooRexx, 1

- Installation
 - Improve Windows installer
 - Windows XP “runas” does not work in latest versions of Windows
 - Use elevation introduced with Vista
 - Improve MacOSX installer
 - Supply ooRexx 4.2.0
 - Circumvent a bug in AOO 4.0.x (PATH not set)
 - If possible, do not preload awt-related classes as AOO 4.0.x and 4.1.x cannot dispatch internal ooRexx macros under certain circumstances

Changes to the upcoming 2014 version of BSF4ooRexx, 2

- New „ooRexxTry.rxj“
 - Enhances existing ooRexxTry.rxj
 - Undockable windows
 - More configuration features
 - Distinguishes between regular and trace output
 - Bachelor paper by Gerald Leitner, work in progress, slated for end of May

Changes to the upcoming 2014 version of BSF4ooRexx, 3

- “Auto-attach” to appropriate Java environment
 - Currently: ooRexx multithreading
 - Save thread ID that can interact with Java
 - Each ooRexx thread needs to use `BSFAttachToTID(tid)`
 - ooRexx programmer must somehow communicate the `tid` to use in new ooRexx threads
 - Each ooRexx thread should then use `BSFDetach()`
 - Cumbersome, hence also error-prone
 - Future:
 - BSF4ooRexx will automatically attach and detach
 - Implementation will be simplified, possibly speed improved

Changes to the upcoming 2014 version of BSF4ooRexx, 4

- Method resolution
 - Change resolving Java methods
 - Allow default interface methods in Java 8 to become accessible
 - Simplifies Java method lookup
 - May improve speed of Java method lookup

Roundup and Outlook

- Roundup
 - Improved installation for Windows and MacOSX
 - New “ooRexxTry.rxj”
 - New “auto-attach” feature
 - Improved Java method resolution
- Outlook
 - Start work on JSR-223 interface for BSF4ooRexx