art - Feature #15656

Milestone # 15372 (Closed): art multi-threading phase 1

Feature # 15374 (Closed): Modifying all framework-provided services to be thread safe.

Make RandomNumberGenerator service thread safe

02/24/2017 09:26 AM - Kyle Knoepfel

Status:	Closed		**Start date:**	02/24/2017
Priority:	Normal		**Due date:**	
Assignee:	Kyle Knoepfel		**% Done:**	100%
Category:			**Estimated time:**	8.00 hours
Target version:	2.07.01		**Spent time:**	14.00 hours
Scope:	Internal		**SSI Package:**	art
Experiment:	-			

Description

This involves making the service stream-aware. However, thread-safety is likely not a problem because creating the engines is done only at configuration time. Moving to using TBB concurrent containers could be helpful.

History

#1 - 03/20/2017 04:34 PM - Kyle Knoepfel

- % Done changed from 0 to 90

This task has been largely completed with commit art:78952fc9. What still remains:

- Some interface will have to be introduced that allows a (e.g.) global module to specify the appropriate random-number engine for a given schedule ID.
- Some thought should be given as to how to handle seeding of per-schedule engines, especially if the creation of the multiple engines is hidden from the user.
- Adequate testing has not yet been done to ensure that concurrent engine retrieval from multiple schedules is correctly implemented. It may be hard to test that until parallel schedules are, in-fact, implemented.

#2 - 03/21/2017 03:09 PM - Kyle Knoepfel

- Status changed from Assigned to Resolved

- % Done changed from 90 to 100

Concurrent usage/retrieval of engines tested with commit art:0ee59041.

#3 - 04/27/2017 01:53 PM - Kyle Knoepfel

- Target version set to 1209

#4 - 05/25/2017 09:10 AM - Kyle Knoepfel

- Target version changed from 1209 to 2.07.01

#5 - 05/25/2017 09:21 AM - Kyle Knoepfel

- Status changed from Resolved to Closed