Imagine….
The power of Simulation

saker solutions

www.sakersolutions.com

The Newsletter of Simulation

Welcome

Welcome to the first edition of 'Imagine' the simulation newsletter. It is our intention for this to be a regular newsletter which will communicate what is happening within Saker Solutions and in the wider world of Simulation. Of course, our focus will be information which we feel will be of use to you. With this in mind, we welcome any ideas or contributions you may have, as we believe strongly that we can all gain by each other's experience, and therefore are happy for this newsletter to be used as a conduit of experience and information which can be usefully shared.

We hope you find the newsletter interesting and look forward to hearing from you.

Saker move to Ragley

As some of you will already be aware we have now moved into our new offices at Upper Courtyard which is situated within the grounds of Ragley Hall, Alcester, Warwickshire, the family home of the Marquess and Marchioness of Hertford.

Aside from the beautiful setting, our Upper Courtyard location affords spacious facilities for both private and public training courses, together with various meeting rooms and exhibition facilities.

If you have not yet visited us at Upper Courtyard , please feel free to come on by. Directions to our facility can be found using the following link http://www.ragleyhall.com/1-visit/1-map.asp

To remove your name from our mailing list, please click here.
Questions or comments? E-mail us at imagine@sakersolutions.com or call +44 1789 762255

Newsletter Spotlight

Saker Sponsors SW08

Saker will once again be sponsoring the OR Society's Simulation Workshop which this year will be held in Redditch, Worcestershire so please feel free to come over to our stand and meet us.

WinterSim 2008

Will be held in Miami in December 2008. Saker will again be attending so please let us know if you plan to attend.

Forthcoming Training

Flexsim
Stage 1 Basic
25th Feb – 29th Feb
31st March – 4th April
12th May – 16th May
16th June -20th June

Stage 2 Advanced
3rd March – 7th March
19th May – 23rd May
21st July – 25th July

Stage 3 Graphics
10th March – 13th March
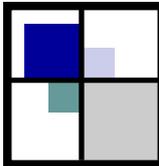14th April – 17th April
27th May – 30th May
7th June – 10th July

Simul8
11th Feb – 15th Feb
17th March – 20th March
21st April – 24th April
2nd June – 5th June

Anylogic
18th Feb – 21st Feb
25th March – 28th March
6th May – 9th May
9th June – 12th June

New Starter

Chris Wood has joined Saker Solutions as a Simulation Consultant having formerly worked in the Finance Sector. Chris brings a host of skills to Saker including SQL Server and C# skills .

Hints & Tips

Flexsim Tip #1

Flexsim allows users to use very large (or small) numbers within calculations or as cycle times; however without proper care these numbers can cause problems for the user if they are not used thoughtfully.

The use of any number within Flexsim (as with most simulation and programming tools) needs a degree of consideration, for instance the statement;

int x=2147483648;

is a typical definition of a number, however the number would actually be stored as:

-2147483648.0 (note this is stored as a negative number!)

Where as

double x=2147483648.0;

would be stored correctly.

The reason for this apparently arbitrary number causing an issue with integers is that the computer stores integers (whole numbers) in 4 bytes, thus total range of signed integer numbers which can be stored is: -2147483648 to +2147483647 When assigning the number the system looks at the type of number you are assigning to and if this is an integer it will interpret it so.

For reference the largest double which can be stored (8 bytes) is in the range:

$+/- 5.0 \times 10^{-324}$ To $+/- 1.7 \times 10^{308}$

Flexsim Tip #2

Crane pickups in Version 4.01 of Flexsim will give slightly different results when compared to version 3.5 for models using travel offsets as the crane will now pickup by moving the crane head to the centre of the flow item. In 3.5 this pickup point was slightly offset. This is documented in the Help system.

Flexsim Tip #3

If a model has one or more breakdowns which the user wishes to disable for a particular run then the MTBF for the first failure should be set to 0. (The user could set this to a large number, observing the points raised in Tip #1 however this will still schedule an event for the specified time rather than disabling it). Remember to reset the model after changing any breakdowns to ensure the events are re-scheduled.

Simul8 Tip #1

When building a model where a process is shared by a number of routes, rather than use complex routing simply duplicate the machine on each route and use the grouping option to ensure only one of the class of processes fires at any one time. This methodology will allow the user to add in simple representations of "shared" resources without the need for more complex routing. A common example where this might be of use is in the area of document processing where an item such as the photocopier maybe a shared resource and to build all the routes may make the model unduly complex. The grouping allows the user to build separate process flows for each task (each with photocopiers simply as inline processes). Although the final model will have multiple instantiations of the photocopier, the "Grouping" will then prevent more than one photocopy process from occurring at a time. Note this works well with high level processes. At a detailed level, other aspects such as priority of task and multiple simultaneous processing of work items may limit its usage.

Simul8 Tip #2

Routing links between workstations can be defined and removed via visual logic, this can be useful when trying to configure complex options via a front end menu. Rather than build all possible combinations, simply create or disconnect the relevant routes using the "Link Simulation Objects" and "Unlink Simulation Objects" commands within Visual logic. It is not advised that these commands are used beyond time zero.