



TABLE OF CONTENTS

NEW FROM THE EXTEND USER FORUM

- Useful data covering Europe
- A time bug in ExtendSim7
- Simulating rare but major events

EXTEND USER FORUM: FAQs and hot issues on SPICOSA's Extend user forum

Tired looking for data? Post your link to data servers that cover Europe on the forum

Sometimes, it can be a hard time looking on the internet for data. Especially for study sites dealing with border crossing issues, the quest for data might be a challenging task. So let's share links to quality data servers. On the Extend forum, a topic was opened where Europe covering data sources can be posted. Internet links lead you to ecological data, economic data and social data servers. With thanks to Loraine McFadden from the Flood Hazard Research Center.

A time bug in ExtendSim7

Jacob Walve, when modelling water circulation at Himmerfjarden, found out that the look up table of ExtendSim7 is not able to interpolate monthly values when the general unit of the model is in days. ImagineThat is solving the problem. Meanwhile, the best thing to do is use the same time unit in look up tables than the general time unit of the model.

How to model a rare event, such as a storm or a technical failure, in a dynamic simulation?

Zoi Konstantinou, at the Thermaikos Gulf SSA, wondered how to simulate a technical failure of a waste water treatment plant causing raw sewage to enter the ecosystem. It is difficult, not to say impossible, to predict when a future failure will take place, yet it can be simulated. A straightforward and easy procedure to do this is called Monte Carlo forward iteration.

Extend has a random number generator. These random numbers follow a uniform distribution between 0 and 1. (Other distributions are optional as well). Now suppose that in our dynamic model, a certain event, such as a technical failure, occurs twice a year, that is a probability $p = 0.005$. To simulate this, we generate a random number r and assume that, if $r < p$, the event occurs, else the event does not occur.

Not convinced? Go to <ftp://eftp.ifremer.fr/FORUM/ExtendForum/> and download the model random_events.mox. In the model, the constant block is the probability of a failure. It is set at 0.005. If you run the model over 365 days, there will be about 2 events every year. Run the model more than once to see this value changing to 0, 1, 3 or maybe a higher number. Play with the probability as well. Assume a probability of 0.5, corresponding to a failure every two days. The number of events per year will approximate 182.

COLOPHON

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SPECIAL ISSUE EXTENDSIM 3

An integrated project
under the EU's 6th
Framework Programme
for Research (FP6) of
the European
Commission



**SIXTH FRAMEWORK
PROGRAMME**

