Short Course Programme

Monte Carlo Simulation for Business Planners, Engineers and Managers

Introduction

Users and operators of complex Technological Systems would like to be able to accurately predict how likely is that all plains, trains, buses and similar revenue generating events will take place out of those expected to take place by well prepared and strategically determined business plans. Answers to these types of questions is essential for the prediction of the size of maintenance teams, number of spares parts, location of maintenance and support facilities and many similar considerations, which directly determine the cost of operation, maintenance and support, which are the main contributors to operational revenue, profit, customer satisfaction and similar business drivers. Any realistic predictions of those quantities, due to complexity of technological systems and business reality could be achieved only by making a use of mathematical technique know as simulation.

Simulation methods in general and Monte Carlo method in particular are a numerical method of solving engineering problems by random sampling. The method can be used to analyse complicated problems in various areas of system engineering such as reliability, maintainability and supportability.

This course is designed to introduce participants to Monte Carlo simulation methods and principles and to equip them with initial skill required for their practical applications by using standard Excel functions.

Objectives

By the end of this course participants will be able to:

- Appreciate the benefits of models and modelling of Technological Systems and Business Processes
- Identify operational processes in modelling terms and their simulation significant events
- Understand the principles of Monte Carlo simulation
- Build basic models using Excel spreadsheets
- Physically Interpret the numerical result obtained

Content

- Physical Properties of Technological Systems
- Physical reality of Business Process
- Modelling Technological Systems and Events
- Modelling Business Processes and Events
- Monte Carlo Simulation:
  - Concept
  - Principles
  - Algorithm
  - Analysis
- Practical Applications to calculation of:
  - MTBF, MTBUR,
  - MTTR (scheduled and unscheduled)
  - MTTS, MLDT, MWTS
  - Operational Cost
  - Operational Availability
  - Operational Revenue
  - Life Cycle Cost and Profit
- **Questions answered:**
  - Size of the model?
  - Number of Simulations?
  - Length of Simulation?
  - Limitations?
  - Disadvantages?
- Hands on Examples and Exercises

Length: 3 days

Key Information	
Dates	19 – 21 October 2011
Time	0900 – 1700
Venue	Woodbury Park Hotel, Golf and Country Club –approximately eight miles by road from Exeter (the nearest major city).
Cost	£950.00 + VAT (tuition, course material, lunches, light refreshments and certificate)
Accommodation	Accommodation is not included in the course fee. Participants are responsible for the arrangement and payment of their accommodation. Reduced rates are available at Woodbury Park Hotel – contact Woodbury Park Hotel Reservations direct requesting the 'MIRCE' rate. Contact details are – Woodbury Park Hotel, Golf and Country Club, Woodbury, Exeter, EX5 1JJ, United Kingdom Tel +44 (0) 1395 233 382 Fax +44 (0) 1395 233 384 Email enquiries@woodburypark.co.uk Web www.woodburypark.co.uk A list of alternative accommodation in other hotels and guesthouses in the area of the course venue is available from MIRCE Akademy on request.
Booking	Please complete a Booking Form for each participant and return it to MIRCE Akademy which is available to download at www.mirceakademy.com under heading Communication and Training.

Contact us

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