10th International MIRCE Symposium

System Operational Success

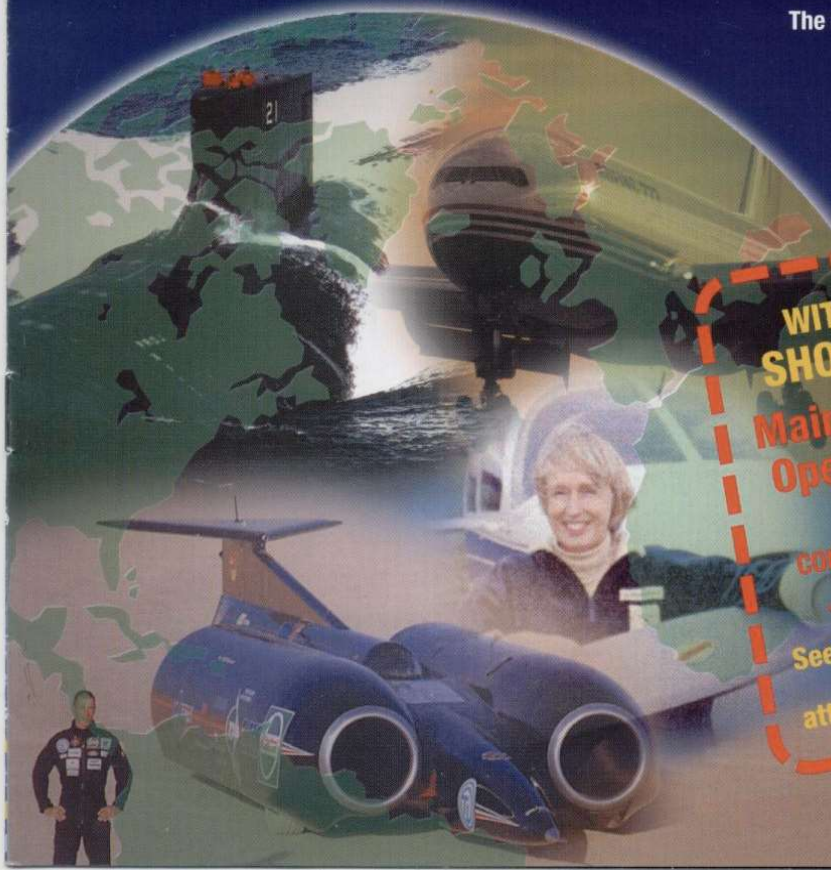
MIRCE Akademy
for
System Operational Success

5-7 December 2000

Woodbury Park, Woodbury,
Exeter, United Kingdom

IN CONJUNCTION WITH

The International Society of Logistics
UK Chapter



WITH OPTIONAL SHORT COURSE

Maintenance Free Operating Period (MFOP)

CONCEPTS, METHODS AND MANAGEMENT

7-8 December 2000

See inside for more details - reduced fee for attendance at both events!

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Director, MIRCE Akademy, UK

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Mr J. Georgiadis
Optimum S.A., Greece

FOR FURTHER INFORMATION PLEASE CONTACT

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10th International MIRCE Akademy Symposium
SYSTEM OPERATIONAL SUCCESS
5-7 December 2000

Dear Participants,

It is my great pleasure to invite you to join us on the 10th anniversary of this well-established international event. In these ten years over one thousand participants, from all continents, have shared and enjoyed an educational and social experience with excellent speakers, presenters and software exhibitors.

Each year the MIRCE Christmas Dinner has been enjoyed by all those attending when friends, colleagues and celebrities mix the traditions of Christmas with good food and perhaps a glass of wine.

This year we have created a new opportunity for participants who attend the two half-day courses included in the programme. All of those who wish to complete the accompanying assignments, are in a position to gain educational credits towards the Akademy's internationally recognised awards of Specialist, Master and Doctoral Diploma.

The course presenters are practitioners of international repute and whose great practical experience has been gained in their industrial careers at the Boeing Company, USA and the Ministry of Defence, UK. - They are, respectively Jack Hessburg and Ian Knowles who command a great deal of respect by professionals worldwide. We are very proud to have them with us.

I trust you will find the Programme stimulating and that you and your colleagues will be in a position to attend this event and give us the opportunity to serve you with the same level of professionalism and motivation as we have done in the past.

I am looking forward to seeing you at Woodbury Conference Centre in December 2000. Woodbury Park is where the passion for Systems Operational Success is shared and emphasised by the achievements of the great motor racing champion Nigel Mansell, and where the concept of System Operational Science originated under the banner of the MIRCE Akademy.

Yours sincerely

Knezevic

Dr J.Knezevic
Director and Founder

Ian Knowles receiving the OBE from HRH The Queen

SYSTEM OPERATIONAL SUCCESS

NEEDS FOR transport, defence, communication, navigation, racing, health, entertainment, education, and similar, are daily manifested by the human race.

System is the chosen term to represent all human made solutions of mutually related elements brought together in order to satisfy perceived needs. They function according to linear chains of cause and effect, based on the existing theoretical knowledge of physics, chemistry, engineering, metallurgy, ergonomics, computing, economics, mathematics, psychology, operational research, and other branches of science. They are produced/constructed by assembling a well-defined number of elements in a precise and pre-established way.

Operational process is the chosen term to represent the flow of tasks performed by operation, maintenance and support teams to satisfy perceived needs of the users/owners by enabling system to perform function. Planned operational flow consists of a well-defined number of tasks, to be performed in pre-established sequences, in accordance with the technical characteristics of the system and theoretical knowledge of management, economics, marketing, operational research and similar disciplines.

However, existing operational experience related to real-life operational process shows that it could be affected by issues such as: *no-fault-found, hole-in-the–wall, schedule-driven maintenance, foreign-object-damage, technology-up-grade, hangar-error, inflation, soldier-boot-phenomenon, oil-crises, shark-bite-failure, pit-wall-decisions, competition culture* and similar experienced by operation, maintenance and support teams, and ultimately by users/owners and society. Real-life operational process often is not a linear chain of cause and effect.

Success is the chosen term to represent the sustained satisfaction of needs under the continuous impact of real-life events. Owners, customers and society are the ultimate judges of system operational success. However, operational success is the result of very challenging multi-disciplinary and multi-dimensional decisions which are necessary to create and sustain the ability of systems to satisfy needs on the one hand, and the impact of events and processes which dominate their operational reality on the other.

Objective

This Symposium is designed to provide participants with information, advanced methods, and tools and techniques necessary to achieve planned levels of System Operational Success.

Target Audience

System Operational Success is addressed from the life-cycle perspective and the Symposium is suitable for Engineers, Managers, Researchers, Academics and others whose interests lie in fields such as Reliability, Maintainability, Supportability, Availability, Maintenance, Logistics, Systems Engineering, Life Cycle Management, Life Cycle Cost, and related disciplines.

Features

- Key Note Addresses
- Technical Paper Presentations
- Opportunity to gain credits towards a MIRCE Akademy Advanced Educational Programme from:
  - Course on New MOD R&M Case Approach
  - Course on Advanced Maintenance Philosophy
- Conference Proceedings
- Discount on Maintenance Free Operation Period course 7-8 December
- World-wide Networking
- Exhibitors
- Visit to Nigel Mansell's World of Racing
- Copy of the book "From Zero to One - Nigel Mansell's Story"
- Traditional Christmas Dinner
- After Dinner Speaker: Polly Vacher, Round the World Solo Aviator
- MIRCE Akademy Fellowship Awards for 2000
- Best Paper Award

The symposium has been organised by the MIRCE Akademy which provides a unique approach to research, education and training activities related to the concept, analysis, management and engineering tasks concerning System Operational Success within the framework of life cycle principles.

Welcome
Welkom
Bienvenue
Willkommen
Benvenuto
Bem-vindo
Velkommen
Bienvenido
Tevetuloa
Vôlkommen
Dobri Dosli
Dobro Pozolovat

CAN YOU HELP?

We'd still appreciate your help with sponsorship … in a number of options … sponsorship of a lunch £500 - sponsorship of Dinner £1000 - possibility of software exhibition £1000 (to include 15 minute presentation, one free attendance to the Symposium, and one free advertising page in Proceedings).

ALL OTHER SUPPORT IS EXTREMELY WELCOME and very much appreciated. Contact MIRCE Akademy.

Programme

Tuesday 5th December 2000

08.00-09.30	Registration
09.30-10.00	Opening Key Note Address: ***Brigadier R. Rickard*** *Director Technical, Defence Logistics Organisation, Ministry of Defence*
10.00-10.30	Defence Logistics Management -Development of a Masters Programme ***Dr D. Moore**, Course Director, Royal Military College of Science, Shrivenham, Cranfield University*
10.30-11.00	Coffee
11.00-12.00	System Operational Science ***Dr J. Knezevic**, MIRCE Akademy*
12.00-12.30	Programmes for Advanced Education in System Operational Science ***Dr A. Vallis**, MIRCE Akademy*
12.30-14.00	Lunch
14.00-14.30	Planning for Military Sustainability both in Service and during development ***Lt. Col. J. Bethell** and **Lt. Col. E. Feldmanis**, Defence Logistics Organisation, Ministry of Defence*
14.30-15.00	Management of Maintenance - Free Operating Period - ***R.H. Burdaky**, RAF Brampton*
15.00-15.30	MFOP in Practice - ***J. Crocker**, Rolls Royce Defence*
15.30-16.00	Tea
16.00-19.00	**Satisfying the R&M Needs of the User** - the R&M Case Approach ***Ian Knowles OBE**, BSc(Eng), MSc, CEng MIMechE (Lately Rel 1 DPA)* How do we determine them? How do we satisfy them? How do we convince the customer that we have satisfied them? *The non-prescriptive approach to R & M programmes and the role of the R & M Case in providing assurance of satisfaction of requirements.*

Wednesday 6th December 2000

09.00-10.30	Keynote Presentation - ***Professor A. Dubi***, *The Clockwork Group, Israel* Application of the Monte Carlo Method in Realistic System Analysis and Design – A Chemical Plant Case Study
10.30-11.00	Coffee
11.00-11.20	Assessment of Inspection Effectiveness ***R. Marshall Smith***, *Rolls Royce Defence, UK*
11.20-11.40	Pumping Success - ***M. Yates***, *Advanced Energy Monitoring Systems, UK*
11.40-12.10	CAME – Computer Aided Maintenance Engineering - ***Y. Zeidman***, *BQR Reliability Engineering Ltd, Israel*
12.10-12.30	Title to be announced - ***Professor B. Vasic***, *University of Belgrade, Yugoslavia*
12.30-13.30	Lunch
13.30	The MIRCE Akademy's Autosport Laboratory *Opening by* ***Nigel Mansell***, *OBE*
14.00-14.20	Logistics Information System and Business Process of a Transportation Company ***S. Pantelic***, *LOLA Institute, Belgrade, Yugoslavia*
14.20-14.40	The Integration of Analysis Techniques as a Method to Improve Design Process Efficiency ***A. Kelly***, *Rolls Royce, UK*
14.40-15.00	Title to be announced - ***Professor L. Papic***, *DQM Research Centre, Cacak, Yugoslavia*
15.00-15.30	Using Aggregated Cumulative Hazard Plots to Visualise Failure Data - ***D. Nevell***, *UK*
15.30-16.00	Tea
16.00-16.30	Location of Spares in a Commercial Airline Network - ***Professor D. Kumar***, *Indian Institute of Management, Calcutta, India*
16.30-17.15	Reliability and Effectiveness of F1 Motor Racing - ***Dr J. Knezevic***, *MIRCE Akademy, UK* Followed by a visit to Nigel Mansell's World of Racing
19.30	Sherry Reception
20.00-23.00	**12th MIRCE Traditional Christmas Dinner** The MIRCE Akademy Fellowship Awards to be presented by ***Nigel Mansell*** *OBE* **Solo Round the World Flight in a Single Engined Piper Dakota** ***Polly Vacher*** *- January 2001*

The MIRCE Akademy for System Operational Success is one of the major sponsors of "Wings Around the World" which is a solo flight around the world in a Single Engined Piper Dakota, the smallest aircraft, flown solo by a woman, to circumnavigate the world. The flight will encompass 17 different countries and cover 24,000 miles.

The main purpose of the flight is to raise funds and awareness of the charity "The Royal International Air Tattoo Flying Scholarship for the Disabled in Memory of Group Captain Sir Douglas Bader" This charity helps disabled people to rebuild their lives. A person's life may have fallen apart after becoming severely disabled from an accident in the prime of their life, or perhaps they have underachieved due to a disability from birth. A "Flying Scholarship" presents an intellectual and physical challenge that they never remotely believed they could overcome. By doing so, they gain confidence and self-esteem. This can lead to getting a job, maybe for the first time.

Thursday 7th December 2000

09.00-12.30 **Maintenance Philosophy**
Jack Hessburg, *Chief Mechanic New Airplanes (retired) The Boeing Company*

"MAINTENANCE IS MANAGEMENT OF FAILURES AND ASSURANCE OF AVAILABILITY."

Jack Hessburg is the first person in commercial aviation history to hold the position of Chief Mechanic, with specific reference to making the Boeing 777 as "technician friendly" as possible. Consequently, Jack proudly says that: "The 777 was built first for the line mechanic because he's the guy who signs the logbook and has to work in this tremendously time-driven environment". The reason for this is very simple: "Maintenance Managers want a clean gate-their report card in line maintenance is based on having a clean gate and not having pigeons roosting at the airplane's fin". With over 40 years of front line experience Jack Hessburg's understanding of dealing with maintenance and safety makes him arguably "the wise man of maintenance" and as such he can speak about maintenance philosophy with great authority.

Maintenance Free Operating Period (MFOP)

CONCEPTS, METHODS AND MANAGEMENT

A SHORT COURSE

7-8 December 2000
Woodbury Park, Exeter UK

In recent months there has been considerable interest in the concept of Maintenance Free Operating Periods (MFOPs) during which the probability that the system will need restorative maintenance is extremely low. Between each of these periods, sufficient maintenance will be done to ensure the system will survive the next MFOP with the same probability. There is no doubt that the days of the MTBF (mean time between failures) and its inverse, the [constant] failure rate are surely numbered. Science, mathematics and probability theory are slowly finding their way into the after-market business and with them will come the need for capable professionals who understand these new concepts, techniques and methodologies. This is true, not just for military aircraft, customers of all manufactured products will demand greater value for money, not just at the time of purchase, they will expect it throughout its life. Manufacturers who have relied on unreliability will need to re-think their policies, processes and finances.

The short course has been carefully designed to provide participants with both breadth and depth of maintenance free operating period and how MFOP can affect the way in which we operate, maintain and support our systems. The concept of MFOP, Maintenance Recovery Period (MRP), MFOP Survivability (MFOPS), Mathematical models for MFOP, Enabling technologies for MFOP, Achieving MFOP through fault tolerance and redundancy will be discussed in detail.

FULL COURSE BROCHURE ENCLOSED

A reduced fee is available for participants attending both the Symposium and this course - see Registration Information for further details.

Registration Information

REGISTRATION

The Symposium Fee is £495 plus VAT. The fee includes one copy of the Symposium proceedings, attendance of paper sessions, workshops, daily lunches, refreshments and the MIRCE Traditional Christmas Dinner on 6 December 2000. (Places are available for the Christmas Dinner only, at £50 including VAT which includes entry to Nigel Mansell's World of Racing).

The Symposium will be followed by a short course Maintenance Free Operating Period (MFOP) 7-8 December. The fee for this course is £425 plus VAT - full details are provided in the accompanying brochure.

Those wishing to register for both the symposium and the short course may do so at the reduced rate of £795 plus vat.

More information can be obtained from:

Symposium Co-ordinator
MIRCE Akademy
Woodbury Park, Woodbury,
Exeter EX5 1JJ United Kingdom
Telephone: +44 (0)1395 233856
Fax: +44 (0)1395 233899
E-mail: mirce@mirce.com
Website: www.mirce.com

VENUE

The 10th International MIRCE Akademy Symposium will be held at the Woodbury Park Woodbury Castle, Exeter, EX5 1JJ, U.K. Woodbury Park is a magnificent leisure and sporting complex, tucked into the rolling hills above the East Devon coast line. (6 miles from Exeter on A3052 to Sidmouth).

ACCOMMODATION

Participants must make their own accommodation arrangements. Since the Symposium is held at the Woodbury Conference Centre, limited accommodation at the Woodbury Hotel is available. Bookings can be made directly by the participants on +44(0)1395 233 382. Please refer to the MIRCE Akademy when booking accommodation. Rooms at Woodbury Hotel are retained for participants until two weeks before the Symposium. After that, rooms cannot be guaranteed. A list of accommodation in the area is available on request.

TRAVEL

Communication between Exeter and other parts of the United Kingdom are excellent:

BY ROAD: The M5 motorway links Exeter to the Midlands, the North, Scotland, Wales and London. Regular rapid coaches from Heathrow (12 departures a day) are available. For information and booking see the National Express web-site: www.nationalexpress.com.

BY RAIL: There is a regular fast rail service to and from Exeter (St David's Station). London is approximately two and-a-half hours from Exeter. For information and booking see the Great Western Web-site: http://great-western-trains.co.uk.

BY AIR: Exeter Airport offers regular flights to many British and Continental Cities and is within twenty minutes drive of Woodbury Park.
For information and booking see www.eclipse.co.uk/exeterair

Communication between Exeter and Woodbury is limited to transportation by car or taxi (taxi fare is about £18) and will take about 30 minutes.

MESSAGE CENTRE

During the Symposium participants may be contacted by telephone on ++44 (0)1395 233856 or by fax on ++44 (0)1395 233899. Please mention the name of the organisers. Messages will be posted on the message board in the entrance hall of the Woodbury Golf and Country Club.

LANGUAGE

The Symposium language will be English.

RECOMMENDED ATTIRE

Business dress during the Symposium, smart casual on Woodbury grounds.

SMOKING POLICY

Out of courtesy to others, smoking is not permitted in the buildings of Woodbury.

MOBILE PHONE POLICY

Out of consideration for the speakers and interested audience, mobile phones have to be switched off during the sessions.

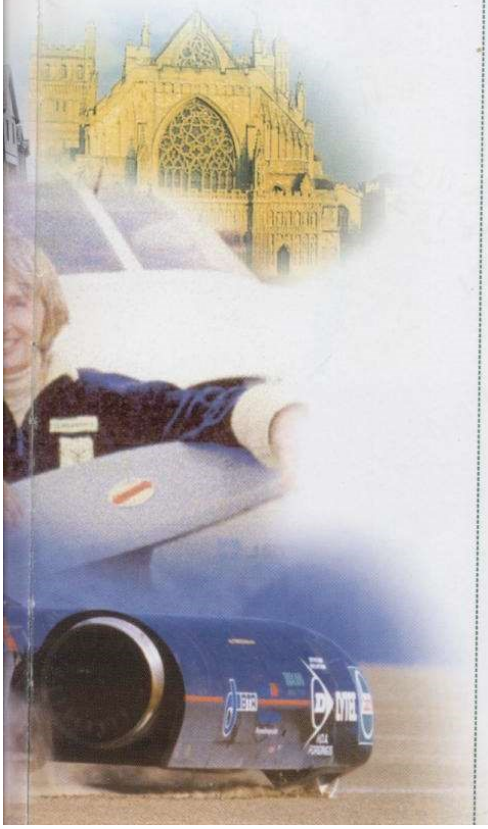
OTHER TERMS AND CONDITIONS

Fees will be refunded only if the specific Symposium in question is cancelled, or if cancellation of enrolment is received in writing at least fourteen days before the Symposium date.

The Organisers reserve the right to alter the schedule or cancel the Symposium at its discretion. All places are offered subject to availability.

The Organisers are unable to accept liability for personal accident or for the loss of, or damage to, the belongings of those attending this Symposium.

Substitution of Participants may be made at any time, provided the registration fee is still applicable.



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SYSTEM OPERATIONAL SUCCESS
5-7 December 2000

Booking Form

PLEASE FILL IN ONE FORM PER PERSON **FORMS CAN BE PHOTOCOPIED**

Name ☐ Mr. ☐ Ms

Surname First Name(s) Title

Preferred name for badge:

Organisation/Company:

Job Title/Position:

Work Address:

Postcode:

Telephone: Fax:

E-mail:

Home Address:

Postcode:

Telephone: Fax:

E-mail:

To which address do you want your correspondence sent? ☐ Home ☐ Work

Do you have any special dietary or disability requirements? ☐ No ☐ Yes

Please specify:

I am attending as: ☐ PARTICIPANT ☐ AUTHOR

☐ SYMPOSIUM £495 + VAT ☐ SHORT COURSE £425 + VAT

☐ SYMPOSIUM for 'SOLE' Members £445.50 + VAT ***(10% Discount)***

☐ SYMPOSIUM AND SHORT COURSE £795 + VAT

Traditional Christmas Dinner only at £50 including VAT: ☐

☐ Please send me an accommodation list.

Payment Details:

☐ I enclose a cheque for £ made payable to MIRCE AKADEMY

Credit Card: ☐ Visa ☐ MasterCard ☐ American Express

Card Number: Expiration date:

Card Holder's Name (print): Signature:

☐ Please send me an invoice to the following address:

Postcode:

I wish to attend the Symposium and have read the Terms and Conditions.

Signature: Date:

Full Joining Instructions will be forwarded to participants one week before the start of the Symposium.

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