

Bulletin

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**Special issue of the Bulletin of EURO on
"IFORS, the International Federation of Operational
Research Societies"**

Edited by Vicky Sauter, Moshe Sniedovich, Elise del Rosario,
Graham Rand, Robert Abrams and Andres Weintraub



What is IFORS?

by Andres Weintraub, IFORS President

IFORS, the International Federation of Operational Research Societies is an umbrella organisation for 45 national societies, involving about 30.000 individual members, plus several kindred societies:

AGIFORS, the Airline Group of IFORS (500 members), the Committee on Operations Research Hungary (20 members), the Fellowship for Operational Research, U.K. (100 members), the Mathematical Programming Society (800 members) and the Resource Modeling Association (100 members, in process).

The national societies are grouped into four regional groupings: EURO (Europe), ALIO (Latin America), APORS (Asia Pacific region) and NORAM (North America).

IFORS celebrated last year its 40th anniversary, with a celebration carried out in Beijing during the 15th Triennial IFORS Conference.

IFORS main objectives are to promote the development of Operations Research worldwide, both in methodology and practice, and to link the different member societies and regional groupings.

IFORS is run by the Representatives of each member country, who decide on basic issues confronting IFORS and its Administrative Committee, which is responsible for the execution of activities and making proposals to the Representatives.

The Administrative Committee is elected for periods of 3 years, and is composed of a President, a Vice President at large, four regional Vice Presidents, representing each region, a Treasurer, elected for a 3 year term, renewable 2 times, responsible for handling all financial matters, and a Secretary who is responsible for all administrative and logistic matters and whose location corresponds to the headquarters of IFORS.

The Administrative Committee for the period 1998-2000 is the following:

- President, Andres Weintraub, Chile
- Vice-President at large, Graham Rand, UK
- Vice President, ALIO, Celso Ribeiro, Brasil
- Vice-President, APORS, Moshe Sniedovich, Australia

- Vice-President, EURO, Dominique de Werra, Switzerland
- Vice-President, NORAM, Robert Abrams, US
- Treasurer, Hugh Bradley, US
- Secretary, Loretta Peregrina, Canada
- Past President, Peter Bell, Canada

For the period 2001-2003 newly elected were Paolo Toth, from Italy as President and Elise del Rosario from the Philipinnes as Vice President at large.

Regional Vice Presidents will be chosen by their respective regions by mid 2000.

IFORS Activities

To carry out its declared objectives, IFORS has developed a series of activities in different areas of interest to researchers, practitioners and teachers, which are presented in the next articles.

Publications

Graham Rand is responsible for this area and his article describes in detail the two publications IFORS publishes, as well as the collaborations in other journal such as OR/MS Today and this EURO Bulletin.

IFORS publishes 2 journals:

The International Abstracts in Operations Research (IAOR), edited by David Smith, which has a long tradition in collecting information on what is published worldwide in the area of Operations Research and the International Transactions in Operations Research (ITOR), edited by Peter Bell, which carries methodological and applied articles with an important international outlook, with articles from very diverse countries, which reflect the IFORS membership.

Meetings

This area is led by Robert Abrams and his article describes the different activities of IFORS in this area. The main Triennial Conferences, the three last of which were held in Lisbon, Vancouver and Beijing, while the 2002 Conference will be held in Edinburgh, reflecting the diversity of the IFORS

membership. The Special Conferences, which are intended as small specialized meetings, and the IFORS collaboration in National and Regional OR Meetings.

IFORS Web page

The IFORS web page is the responsibility of Moshe Sniedovich, and IFORS regards its Web site as a key tool for the promotion of OR in the international scene. The information contained, as described in Moshe Sniedovich's note, includes local and international conferences, career opportunities and activities of the different Societies.

Developing Countries

Developing countries is the responsibility of Elise del Rosario and her article describes the multiple activities IFORS has developed to support OR in developing countries, which include specialized conferences, a Developing Countries Prize Competition in each Triennial Conference and specialized reading material. A special effort is being carried out to incorporate African OR academics and practitioners into our activities, directed by Graham Rand.

OR Education Material

Vicky Sauter, chair of this committee, explains in her article a new project started by IFORS. The main focus of this project is to provide educational material such as case studies, methodological readings, algorithms, in an organized way. This will be done mainly through developing in a IFORS web site relevant OR educational material in a classified and organized way, by language and theme, in a user friendly form, with the support of and collaboration of member societies. EURO has agreed to participate in this project and has named Valerie Belton to the committee.

IFORS publishes two Newsletters.

The IFORS Bulletin was initiated by Heiner Müller-Merbach in 1976. The IFORS Secretary, then Helle R. Welling, took over the editorship in 1979 and the first issue saw the light in February of that year, and since then the Bulletin has been distributed to all member societies and to OR interested persons. Helle Welling was responsible for the Newsletters for two decades and developed into a traditional and useful means of transmitting information on what is going on in the OR world, in particular to

smaller societies. The Bulletin is a non-scientific publication. The Bulletin carries information on IFORS and OR activities/initiatives worldwide. But its main role is, probably, to establish a link among the various member societies. In the Bulletin the IFORS member societies and OR people can publish everything that is going on in their respective society. Such information reaches out to all their colleagues on other OR Societies, and to a great number of lone OR workers spread all over the Globe.

The present IFORS Secretary, Loretta Peregrina, is now the editor of the Bulletin. If you wish to have YOUR information published in the Bulletin, please contact Loretta Peregrina - lperegri@ivey.uwo.ca.

The OR For Developing Countries Newsletter is intended for academics and practitioners in developing countries (DC), and those interested in aspects relevant to them. It has been published with interruptions for about 10 years, by Roberto Galvao from Brasil and Nitin Patel from India. The Newsletter is presently edited by Arabinda Tripathy from India, and is being published regularly. It carries information on specific activities related to DC, as well as articles on this area such as "Is There a Separate OR for Developing Countries?", by its editor, Arabinda Tripathy.

Readers, wishing to know more about the activities in the area of OR FOR DEVELOPING COUNTRIES, may contact:

Elise A. del Rosario: e.delrosario@pacific.net.ph
Arabinda Tripathy: tripathy@iimahd.ernet.in
or IFORS Secretariat at: ifors@ivey.uwo.ca

We hope that reading the articles presented in this Bulletin will convey a good idea on the objectives and activities of IFORS.

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OR Educational Material

IFORS has a new initiative, a committee addressing improved access to ORMS educational materials worldwide. This committee is being chaired by Vicki Sauter (Vicki.Sauter@umsl.edu) and includes the following individuals:

- Valerie Belton (val@mansci.strath.ac.uk)
EURO Representative
- Elise A. Del Rosario (elisear@sanmiguel.com.ph)
Coordinator Developing Countries Committee
- Hans Iltmann (hittmann@csir.co.za)
ORSSA Representative
- Susana Mondschein (smondsche@dii.uchile.cl)
ALIO Representative
- Moshe Sniedovich
(m.sniedovich@ms.unimelb.edu.au)
IFORS Vice President representing APORS
- Yu Wenci (wcyu@se.cuhk.edu.hk)
Developing Countries Committee Liaison

In addition, we hope to have one North American member representing the INFORM-ED forum of INFORMS.

This effort is not intended to compete with any existing effort, especially not with the INFORM-ED effort in the United States, the tutOR project in Australia, or the effort by people such as Valerie Belton and John Beasley in Europe, and Theo Stewart in South Africa (just to name a few). Rather, the Committee intends to bring together the work of individuals across the world, and build upon their work to provide a value-added contribution.

Right now, we believe the contribution that would add value is to provide search capabilities to make access to already available materials easier to find. We are considering multiple ways of providing search capabilities of existing materials, and will continue to evaluate their effectiveness in meeting the needs of the world-wide community. However, we are also looking at other mechanisms for making a contribution to the community and would be grateful for any ideas that you can provide.

Our current goal is to provide a database of ORMS teaching materials that can be accessed by profes-

sors worldwide. Why? Back in the dark ages not so long ago, all professors had access to the primary teaching props of the field: a blackboard and the back of an envelope (or, in more advanced discussions, the napkin). However, times have changed significantly and ORMS faculty today have a wealth of information they can use to present, explain, illustrate and test students on the principles in their classes. Some have developed wonderful simulations, illustrations, bibliographies, cases or other materials that they make available to others for free or for some fee. If a faculty member has found the materials, then he or she can adapt them as appropriate for a particular class.

The materials can be quite useful if you can find them. While the Internet overall, and the Web in particular, have reduced some barriers to sharing the wonderful tools some of our colleagues have developed worldwide, its success has created a significant barrier in that it can be difficult to find relevant materials. This is especially true if you seek materials that are written in non-English languages or use examples from Developing Countries. Without a resource for cataloging and searching for the materials, many needs continue to be unfulfilled.

Operationally, we will identify resources that are available and make them easily accessible to users. We will create a database of materials and a mechanism for searching those materials that provides the greatest possible resource to the IFORS membership. This, in turn, means that we must identify the ways in which our users will search the database and ensure that the tool supports that search mechanism.

We have already begun to compile a list of resources, with a crude categorization mechanism at <http://www.umsl.edu/~sauter/ifors/>. The next two steps will be to augment that list and developing a better way to categorize the materials. At the same time, we are investigating possible search mechanisms from available software to developing our own search procedure.

To get this effort started, the IFORS Education Resources Committee is asking for your help. Please send us information about your secret

weapons in teaching ORMS. The Committee needs to know what software you find useful, what cases have been successful, and what demonstrations you use. In fact, we would like you to identify all of the materials you use in your classes for our catalog. If the material is already available on a web site, we would like to know about that web site. If you use a tool or a case or a summary described on a web site, we would like to know about that web site. If you have a

particularly useful tool that is never referenced on the Web, we would like to know about them as well. We want to know about it despite where it is found, how it is used or in what language it is written. You can send whatever you have to me at, or to any of the Committee members identified above. Then watch for more information about the web-based catalog you can use.

Vicky Sauter

The IFORS Web site

IFORS regards its web site as a key tool for the promotion of OR on the international scene, including career opportunities in OR world-wide, local and international conferences and workshops and coordination between activities of the national societies in these areas.

IFORS plans to expand its WWW operations in cooperation with its national societies and regional groupings. The objective would be to complement rather than compete with the national societies and regional groupings and to focus on "international" issues. Special attention is given to:

- Supporting OR activities in developing countries
- Strengthening the links between the national OR societies
- Promoting OR internationally
- Education

A new site was established 1998 and is now divided into two parts:

- Orbit: containing "static" information on IFORS itself (eg executive, by laws, publications, conferences and meetings, profiles of national members, and so on). The directory consists of 360 files (20MB)
- PanORama: an on-line magazine (Celso Ribeiro and Moshe Sniedovich, Editors) containing news

items and information on OR activities world-wide. At present the main directories are for conferences and jobs. The directory consists of 220 files (5MB).

Needless to say, the site provides support for IFORS Triennial Conferences. The last one was in 1999 in Beijing, the next one will be in Edinburgh in 2002.

A major activity in 1998 was web support for the IFORS 99 Conference. This activity has been greatly intensified in 1999.

The major planned activity for 2000 is in the area of Education. Plans are already under way for the development of database for educational material, including on line tutorials.

The IFORS Web site is carried out by Moshe Sniedovich, from the University of Melbourne, Australia and IFORS Vice President representing Asia Pacific. His e-mail is:
m.sniedovich@ms.unimelb.edu.au

More information on this project can be found at <http://www.ifors.org/education/>.

Moshe Sniedovich

IFORS

Activities for Developing Countries 1995 - 1999

"IFORS (and national OR societies) should ensure that decisions which are made regarding developing countries take to account fully the views of those involved in OR for development and developmental issues in the developing world. It should be the task of the Developing Countries Committee of IFORS, represented by its chairman on the IFORS administrative Committee, to ensure that these views are effectively represented..."

A Policy on OR for Developing Countries approved during the first IFORS Conference on Development

The above policy was set in 1992 during the first International Conference on OR for Development (ICORD). It served to formalize the establishment of the Developing Countries Committee in 1992. People involved in the efforts included Nitin Patel of India and Roberto Galvao of Brazil. Elise del Rosario of the Philippines took over from 1995 to the present. This account details IFORS accomplishments and outlines future challenges.

Paper Competition

During the IFORS XI Conference in Buenos Aires, the Third World Prize was awarded to encourage and reward the best applications of OR in a developing country. The first Chair was Bob Kavanagh, who awarded the US\$500 prize to the paper, "The National Assessment of Education in Chile" by Nicolas Majluf. At the IFORS XII in Athens, the Prize Chair, Roberto Galvao, announced the decision of the judges that no entry was qualified for the Prize. In Lisbon, IFORS XIV Third World Prize winner was G. Dutta of India who wrote the paper on "A Linear Programming Model for Distribution of Electrical Energy in a Steel Plant". A First Prize of US \$1000 and two Second Prizes of US \$500 were awarded by the Chair, Jonathan Rosenhead.

Again under Jonathan Rosenhead, the IFORS XIV Prize has been renamed IFORS Prize for OR in Development. Prize money has been increased to \$2000 for the First Prize and \$1000 for the Runner-up Prize. Twelve entries deemed eligible were received, and seven were short-listed. Six of the papers were presented during the IFORS XIV Conference in Vancouver, Canada. Chosen as the

winner was the paper on "A Project Evaluation System in the State Economic Information System of China: an operations research practice in the public sector" written by X-S Zhang and J-C Cui. This entry was also the National Contribution of China.

During this time, policy and procedural changes were suggested and approved, such as the adoption of the UNCTAD listing of 'Least Developed Countries' and 'Developing Countries' to settle questions on who qualifies and not. The most recent Prize-winner was also automatically included in the succeeding year competition jury.

The 1999 competition was chaired by Goutam Dutta of the Indian Institute of Management. Owing to the increased prize money, high prestige it enjoyed in the last Conference, but most of all, from the energetic efforts of the Chair, a record 47 papers from Bangladesh, Chile, China, Cuba, India, Mexico, Philippines, South Africa, Saudi Arabia, and Turkey were screened. 1998 saw main efforts directed at advertising the competition, getting the contestants, and streamlining the contest rules and procedures. Participation of the IFORS Administrative Committee came in the form of raising the funds for the prize money and financial assistance to the contestants. The Operations Research Society of Japan donated a 2 million yen assistance that will help defray the registration fees and part of travel expenses of the contestants.

The jury for this prize were: Robert A Abrams from USA, Elise A Del Rosario from Philippines, Xiang-

Sun Zhang from China, Theodore Stewart from South Africa, Nelson F Maculan from Brazil and Jan Weglarz from Poland. This jury awarded the US\$ 2000 first prize to Xikang Chen, Xiaoming Pan, Cuihong Yang, Institute of Systems Science, Academia Sinica, Beijing, China for their work "On the Study of China Grain Output Prediction". The paper presents a systematic and integrated approach, with key methods of input-occupancy-output analysis, nonlinear variable coefficient forecasting equations and minimum sum of absolute value technique, for predicting China grain output. Since 1980, this approach has been successfully implemented in China and was appreciated by top Chinese leaders including Li Peng, the former Prime Minister of China.

Two-second prizes of US \$ 1000 each were given to two papers, one from South Africa and the other from China. The paper "An Active Decision Support System for Optimality in Open Air Reservoir Release Strategies" by Jan H Van Vuuren, Werner R Grundling, Department of Mathematics, University of Stellenbosch, Matieland, South Africa determines good release strategies for open air reservoirs. A computer implemented decision support system was designed to help reservoir managers in policy formation. The other paper "Application of Operations Research in Agriculture Management in China" by Qingzhen Zhao, Institute of Information Management, Shandong Teachers' University of Jinan, China, describes the various uses of operations research methods in agricultural management in Changing county and Shandong province in China.

The next IFORS conference and the prize competition will be held in Edinburgh, Scotland in July 2002.

ICORD

The first International Conference on Operational Research for Development (ICORD) was held in at the Indian Institute of Management in Ahmedabad, India in December 1992. The Conference aims to provide a forum for intensive discussion and exchange of experiences of various researchers dealing with OR in developing countries and OR for development. It is intended to provide a forum for an effective interaction and discussion among a critical mass of participants from the developing countries.

The next ICORD came four years later in August 1996 at Rio de Janeiro, Brazil. It was held in conjunction with CLAIO VIII, the biannual congress of ALIO, (the Latin American OR Society) and featured 7 papers from Brazil and another 7 from Venezuela, Argentina, USA, and India. The Congress organizers, Claudio Bornstein from Brazil, and Jonathan Rosenhead from UK were joined by Roberto Galvao of Brazil in the opening ceremonies. Suggestions of future support from IFORS to issues of development were generated. IFORS helped defray the expenses for this conference for the amount of US\$5000.

With a financial support of USD 2,000 from IFORS, the third ICORD was held in Manila in November, 1997. This was held in conjunction with the International Conference on OR/MS (ICORMS) that is traditionally sponsored by the Operations Research Society of the Philippines. Under the theme of "Operations Research in Development", thirty-nine papers on Manufacturing / Production / Facilities Location Concepts and Techniques, Applications in IT and the Public Sector, Multi-Objective Programming and Econometrics, Statistics / Probability / Queueing, and Applications in the Service Industry were presented by foreign and Filipino experts. One hundred and twenty participants from 16 countries attended the four-day conference, including 79 local and 41 foreign delegates. Seven plenary sessions were held over four days. In lieu of the Teacher's Workshop that was planned to proceed in parallel with the session, Dr. Peter Bell, IFORS President, and Dr. Christoph Haehling von Lanzener led an interactive lecture on "Teaching OR/MS", introducing the case approach as an effective tool in teaching the subject. Based on their long experience with the method, the two professors gave guidelines and a host of examples on selecting and building up classroom discussions of OR/MS cases.

A highlight of the conference was a panel discussion on the "The State of OR". In line with IFORS's efforts to advance OR theory and practice worldwide, it sought to understand issues affecting OR/MS. Representatives of ten OR Societies from developing and developed countries presented recent developments, problems, and the extent of OR use in their respective countries.

The fourth ICORD will be held in around April 2001 in South Africa.

International Dissemination of the Papers of ICORD

Papers from ICORD '96 which satisfy the normal refereeing requirements were published in the SOBRAPO journal as a special issue. Papers from ICORD '92 were published in 1996 and made available to the participants of ICORD 97. Titled *Operational Research for Development*, it was edited by Jonathan Rosenhead and Arabinda Tripathy. Proceedings of the ICORD 97, in turn, is in a camera-ready format and awaiting assistance for IFORS funding for its printing.

Newsletter

A proposal for a Developing Countries Newsletter was first brought out during the IFORS XII to encourage appropriate OR training. The Policy on OR for Developing Countries adopted during the ICORD 92 sees the newsletter as a vital medium to ensure that views of those involved with OR for Development are effectively presented, discussed, and represented in decisions at the IFORS level. The last regular issue was released October, 1993, followed by a 1996 issue released during the Vancouver Conference.

Under the competent editorship of Arabinda Tripathy of the Indian Institute of Management, two issues of the *OR for Developing Countries* were next published in 1988, one in January and the other in November. The November issue contained a book review of *Operational Research for Development*, an article on OR Applications at the District level, a sampling of OR successes in DCs, an insightful piece assessing IFORS efforts on DCs, as well as an exposition on the ongoing IFORS DC programs. It successfully focused on issues, efforts, solutions, successes and problems of OR in DCs. The last issue was distributed during the Beijing Triennial Conference last August 1999. A. Tripathy is planning out future issues.

Readings in Operational Research for Development

This project was prompted by the perceived lack of readily accessible and well-presented material on

the contributions that OR could make in the most deprived societies. Hoping to address the restricted penetration of OR in developing countries which, among others, inhibits the teaching of OR from a third world perspective, the publication of a book of readings in *Operations Research for Development* was launched.

The book of readings is envisioned to contain the most original, perceptive and weighty contributions to the practice of Operational Research in developing countries, with a focus on the distinctive features related to a third world. This effort was conceptualized and will be spearheaded by Jonathan Rosenhead of the London School of Economics and Claudio Bornstein of the Federal University of Rio de Janeiro.

As editors of the Reader, Profs. Rosenhead and Bornstein have reached provisional agreement with a publisher, conditional on the delivery of a synopsis of the book. The publisher wishes there to be a significant new and critical content, which will need, substantially, to be supplied by the editorial introductions. A project has been carried out with a view to locating promising material.

Trainers' Workshop

The Trainers' Workshop last held during IFORS XII is concerned with giving appropriate training for trainers, with particular emphasis on developing countries. There are plans to do this on a regional basis to make it cheaper for participants in developing countries. A training of some sort was undertaken in conjunction with ICORD III. While not a full and exclusive teacher's workshop, the ICORD served to share the Case Method of OR/MS Teaching. The enthusiastic participation and feedback of the local participants from the academe is indicative of the learning that took place in this mini-workshop.

Plans will be made to determine the feasibility of holding more of these types of training either in parallel with other Conferences or by itself.

Dissemination of Educational Materials

An alternative or in support of the Trainers' Workshop program, this activity is aimed at identi-

fying, gathering, and disseminating educational materials that will help promote and improve the teaching and learning of Operations Research, most specially in developing countries. Efforts will be made at promoting this program among the academics and practitioners in the developed countries. A plan of action is being prepared by a committee led by Vicky Sauter.

Regional Initiatives in Africa

IFORS concern for the lack of organized OR activity in the continent of Africa (in which only Egypt and South Africa have national OR societies) has put into motion several initiatives led by IFORS VP Graham Rand in 1998. They are:

A survey of OR graduates.

Many from Africa have been educated in OR. A survey was initiated in 1998 to gather information which may help in developing links, which may in turn lead to some form of organisation. Replies have been received from the following countries: Ghana (1); Kenya (6); Lesotho (1); Morocco (1); Nigeria (8); Tanzania (1); Zambia (1); and Zimbabwe (3).

All replies indicate a positive response to the establishment of a network. Those that replied to the survey will form the initial network, which will be established within the year. Further efforts will be made to expand the network.

IFORS sponsored a conference on "Mathematics in Industry" in Bulawayo, Zimbabwe (October 5-7, 1998), organised by Sue Maddock of the Department of Applied Mathematics, National University of Science and Technology (NUST). Theo Stewart represented IFORS on the Committee and presented a plenary paper.

IFORS has had contact with Santosh Kumar with a request to consider whether the Zimbabwe Association for Applied Mathematics (ZAMM) could be affiliated to IFORS. At this stage, it would seem best if ZAMM could be linked in some way with ORSSA.

IFORS has been informed that Kenyan Universities are starting the "Nairobi Journal of Mathematics" in which they hope to include papers in Operational Research.

Workshop on Local Area Planning in Developing Economies

Through this IFORS-sponsored workshop, the Triennial Conference participants were enlightened on the overall aspects of the work done in local area planning in India. Led by R. Bandyopadhyay of the Centre for Applied Systems Analysis in Development in India, it consisted of a 1 1/2 hour plenary session followed by a workshop. A forum was conducted to discuss steps needed to further strengthen the mechanism and system of interchange of ideas among OR scientists.

Other Activities

Other activities were proposed and started, such as the **OR Practice Survey** in developing countries initiated in 1995. This aimed to determine the state of OR practice in developing countries. The objective is to identify common issues and problems that could suggest high impact programs that the committee can undertake. Survey forms were distributed. Returns from the various national societies were very scattered as to derive meaningful conclusions. Nevertheless, the high returns achieved for the Philippines had been the subject of a paper which hopefully will be reprinted in the Newsletter within the year.

The **Data Base Project** is premised on the assumption that a greater availability of information will maximize benefits gained from the trips of IFORS - affiliated speakers, specially to developing countries. It is common knowledge that sponsorship to finance trips of resource speakers are hard to come by for organizations in developing countries. On the other hand, visiting OR professional may want to explore the opportunity to further share their expertise and learn from exchanges.

It is proposed that the feasibility of creating a data base of visits by potential resource speakers to developing countries be studied. Likewise, organizations needing expertise in certain areas can flag their requirements through this vehicle. It is envisioned that this data base, highlighting opportunities and requirements, shall be made available to the IFORS community. The IFORS Website is being tapped as one vehicle for matching the needs for speakers and consultants versus planned trips of IFORS-sponsored or IFORS-affiliated speakers. Problems of who will maintain such a data base have hampered progress on this project.

The **CEO Program** was conceptualized in recognition of the lack of awareness of OR as an important tool by top management, this program is meant to increase their awareness of OR. Contact persons from member countries will be provided full support in implementing a "packaged program" that acquaints CEOs with OR tools, which may include video tapes, exhibits, and presentation of successful OR applications by past Third World Prize Winners. This program has yet to be started.

The use of **OR in Nationbuilding** program would have a similar objective as the CEO Program, but with usage of OR in the government sector. Activities are initiated towards the goal of assisting governments, more specially developing economies by tackling issues of development. A pilot program has been started in the Philippines under the Operations Research Society of the Philippines Committee on OR for Public Service (ORSP Corps), led by E. del Rosario. It is a volunteer group that

works with government agencies in streamlining operations, decision-making and taking part in studies which have great impact on promoting national development.

Looking forward

In the last Triennial Conference, IFORS member countries urged IFORS to take a more active role in sponsoring the attendance of nationals from developing countries in conferences such as the Triennial Conference. Assistance with resources, such as books and subscriptions to publications for members in the less developed countries were also raised for consideration. This is an issue that IFORS will need to tackle in order to be effective in its role as far as developing countries are concerned. The Committee will work on programs that could possibly address these concerns.

Elise del Rosario

IFORS Publications Report for EURO

IFORS has four publications: The Bulletin, the Developing Countries Newsletter, IAOR and ITOR. This report deals with the last two.

International Abstracts in Operations Research

Paper version

Stockton publishes this 6 times per year. The publication of the 50th volume was celebrated during the IFORS Conference in Beijing. Currently each year over 3000 abstracts of OR literature are published from nearly 200 journals. Each abstract is classified, and an index of keywords is available. It is thus a unique reference source for the subject.

David Smith (University of Exeter, UK) edits IAOR. In 1999 he reported a backlog of supply from a few editors. One reason for this is that the responsibility for the North Holland journals falls on the Dutch OR Society, because of IFORS historic policy of national contributing editors. It was agreed to pursue ways to achieve a more effective and efficient mechanism for the production and classification of the abstracts from EJOR, which is published by North-Holland in the Netherlands. The need to abstract EJOR, and other journals from the same publisher, means that the Dutch contributing editors have a heavy load in relationship to the size of their national society. As in other countries, academics that are willing to give the time and energy to work for IAOR are scarce.

Following discussions with the team of Dutch contributing editors, an editor for EJOR contributions has been appointed. IFORS is very grateful that they are willing to undertake this workload.

IAOR has been growing slowly over the last few years. Nevertheless, a backlog of abstracts waiting for publication has also been growing. It was agreed during 1999 that Stockton should be encouraged to increase the size of IAOR gradually, despite the consequent increase in cost and selling

price. David Smith has worked with Stockton to improve the layout of IAOR so that the number of pages in each volume does not grow as rapidly as the number of abstracts. The changed layout will take effect from volume 51, in 2000. The production cost is related to both the number of pages and the number of Abstracts (because of typesetting costs) so there will be an increase in the cost of IAOR, but it is hoped that there will be little effect on the number of institutional subscribers.

CD-ROM version

The CD-ROM is a collection of the IAOR abstracts from 1988 until 1997. Initial sales of the CD have been disappointing. Discussion continues about updates of the CD-ROM and on how best to include material earlier than 1988.

International Transactions in Operational Research

Elsevier currently publishes this 6 times per year in roughly 440 pages. Volume 6 was completed in 1999. There are about 50 institutional subscribers from within Europe. IFORS' member societies are requested to encourage their members to get their libraries to take ITOR, and to solicit contributions from their members. Any society interested in securing bulk subscriptions for their members, either mailed direct, or through the Society, should let me know.

IFORS was informed in December 1999 that they wished to cease publication at the end of Volume 7. Fortunately, Blackwells had approached IFORS about the possibility of taking over the publication of ITOR, and the negotiations were concluded at the same time. Therefore, from January 2001, Blackwells will be publishing ITOR, and detailed marketing plans and innovative pricing policies will be created during 2000.

Graham K. Rand (g.rand@lancaster.ac.uk)
January 2000

IFORS Meetings Report

The major IFORS meeting news is that an extremely successful IFORS Triennial meeting was held last August in Beijing. Also plans are well under way for the next IFORS Triennial meeting to be held in Edinburgh in 2002. A review of the Beijing meeting by Graham Rand and some notes on the Edinburgh meeting follow in section 1 below.

In addition to the IFORS Triennial Meetings several initiatives involving IFORS members' meetings and regional subdivision meetings have been put into place. The general theme of the initiatives is that because IFORS has access to operational research practitioners throughout the world, it is uniquely positioned to add an international aspect to the meetings of its member societies. Thus, IFORS is attempting to add speakers, panels and sessions that bring a new international contribution to the these meetings.

1. The IFORS Triennial Meeting in Beijing, August 16, 1999

The Local Organising Committee for the Beijing conference was headed by Prof. Xiang-Sun Zhang, President of the Chinese Operational Research Society; Prof. Kan Cheng was in charge of the Conference Secretariat. Both are members of the Chinese Academy of Sciences. There were about 800 participants from outside China coming from 49 countries, in addition to 200 participants from China, which included 31 from Hong Kong. Paolo Toth, program chair, and his committee did an outstanding job in developing the scientific program. Professor Toth, a recent EURO Gold Medal recipient, will be take over as IFORS President in 2001.

The Conference was held from Monday to Friday with 27 tracks in parallel. At the opening ceremony Hsu Guan Hua, Deputy Minister of Science and Technology expressed the determination of China to continue a policy of open reform and modernization of Science and Technology. David Ryan, from New Zealand, gave the opening plenary on the theme Real OR, drawing on his extensive experience of working with various organisations, notably Air New Zealand. Later in the week Egon Balas gave a second plenary on combinatorial optimization.

In Beijing, a stream of papers was devoted to OR for development right through the conference, including 8 papers entered for the IFORS Prize for OR in Development (selected from 47 entries), which was sponsored by the Daiwa House Industry Co., Ltd. in co-operation with the Operations Research Society of Japan. The competition was exceptionally well organised by the Chair of the jury, Prof. Gautum Dutta. Details of the results were published in the October 1999 issue of OR/MS Today.

The social program was equally memorable as the scientific program. One of the highlights was on the Tuesday evening, when the 1000 participants and 300 accompanying persons visited the 21st Century Theater for a specially organised evening of Chinese Opera, dancing and acrobatics.

On the Wednesday, as is a tradition, the scientific program was suspended, and all participants were taken on a day trip to the Great Wall, an experience to remember. For both outings, a special fleet of 36 buses was used, with police escort, which allowed quick passage through red lights and traffic.

On the last day of the Conference, a special session was organized by Graham Rand, IFORS Vice President to commemorate the 40th Anniversary of IFORS. A multi-media presentation of tapes, overhead slides and interviews highlighted special moments for the federation during the last forty years. A representative from nearly every member society came to the platform in a particularly impressive demonstration of the world-wide nature of the Federation.

The next IFORS Triennial Conference will be held in Edinburgh, Scotland in 2002. Plans are well under way. The program chair is Ben Lev. He will be happy to receive your ideas for sessions and presentations. Details can be found at: <http://www.som.umd.umich.edu/ifors2002>.

2. The IFORS Distinguished Lecture

In order to provide a forum for highly respected operations researchers working in OR fields that have significance in many parts of the world,

IFORS is sponsoring distinguished lectures at meetings of its member societies and regional subdivisions on a regular basis. At the INFORMS Cincinnati Meeting, an IFORS sponsored distinguished lecture was presented by William Pierskalla, former President of IFORS and of ORSA. His subject was "The International Challenge of Quality & Costs in Health Care Delivery". Professor George Nemhauser will be IFORS Distinguished Lecturer at the EURO meeting to be held in Budapest beginning July 16, 2000. Thomas Magnanti, Dean of Engineering at MIT, will be the IFORS Distinguished Lecturer at the INFORMS Salt Lake City Meeting beginning May 7, 2000. Dean Magnanti will speak on the profound effect that information and communication technologies are having upon university education and research. Professor Nelson Maculan of the Federal University of Rio de Janeiro will be the IFORS Distinguished Lecturer at the ALIO conference in Mexico City, September 2000.

3. IFORS Sessions at Meetings of IFORS members and regional Meetings

Beginning with INFORMS-CORS meeting in Montreal (spring 1998), IFORS has contributed sessions to INFORMS, EURO and ALIO meetings. In addition to the Montreal INFORMS-CORS meeting, IFORS sponsored sessions and panels have been included in the EURO meeting in Brussels in July of 1998, in the INFORMS meeting in Cincinnati in spring of 1999, and in the ALIO meeting in Buenos Aires in September 1998. Sessions topics have included transportation, flexible manufacturing, forestry, and the international aspects of OR. Of particular interest at the INFORMS meeting in Cincinnati, at the ALIO meeting in Buenos Aires, and the EURO Meeting in Brussels were the panels moderated by IFORS President Andres Weintraub. At the Cincinnati meeting the topic was "Opportunities for Applied Operations Research Worldwide" with panelists Michael A. Florian; University of Montreal, Yoshiro Ikura, SAITECH, Frederic Semet, Universite de Valenciennes. At the ALIO Meeting in Buenos Aires, a similar panel on global OR was held with panelists J. Barcelo (Spain), T. Liebling (Switzerland) and N. Maculan (Brazil), and at the EURO meeting in Brussels in IFORS sponsored pan-

els on "Is OR Global?" and on "The social responsibilities of OR". At the EURO meeting in Budapest in July, in addition to the IFORS Distinguished Lecture by George Nemhauser, IFORS will be sponsoring two sessions on forestry, a tutorial on OR Education (Moshe Sniediovich) and a panel on OR Consulting (Weintraub and Abrams).

IFORS plans to continue to sponsor sessions at future meetings of its members societies and welcomes suggestions from potential organizers of sessions on OR topics with an international aspect. Please contact rabrams@uic.edu if you have suggestions for IFORS sponsored sessions, and we will help make arrangements to sponsor the sessions.

4. IFORS Special Conferences

IFORS Special Conferences are intended to be relatively small meetings on special topics that can be organized with a minimum of bureaucracy and which will benefit from the international exposure that IFORS can give. Information on, and new guidelines for, organizers of IFORS Special Conferences have been developed and placed on the IFORS web page at:

<http://www.ifors.org/conferences/spcguide.html>

In the last year, two IFORS Special conferences have taken place: Organisational Structures, Management, Simulation of Business Sectors and Systems. September 10-12 1998, Kaunas University of Technology, Kaunas, Lithuania, and Active Decision Support Systems, December 17-18 1998, Åbo, Finland. A special conference on "New Trends in Banking Management" to be held in Athens in spring of 2001 has recently been approved. A list of the previous IFORS Special Conferences is at:

<http://www.ifors.org/conferences/spcabout.html>

IFORS welcomes suggestions for special conferences. Please contact rabrams@uic.edu or the IFORS secretariat, Loretta Peregrina, at: lperegri@ivey.uwo.ca with questions on IFORS special conferences.

Robert Abrams

Message of the President of EURO

Being in the middle of my term, it seems to be appropriate to give some account on the present state of EURO. This appears to be all the more adequate as there was no EURO Conference in 1999 at which a vivid information exchange usually takes place. At the Council meeting in Beijing, where the IFORS Conference took place last year, we took the opportunity to establish closer links between EURO and IFORS. A more intensive exchange of information was agreed upon and mutual activities were discussed to establish Operations Research in developing countries. Also at the Council, Philippe Vincke was elected to be president in the period 2001/2002 and Zilla Sinuary-Stern was elected as Vice President I. She is replacing Valerie Belton and is responsible for EURO k Conferences and Summer/Winter Institutes.

I would like to warmly welcome the incoming members of the Executive Committee (EC). At the same time, the EC expresses its sincere thanks to Jan Weglarz, our leaving Past President, and to Valerie Belton, who served EURO for four long years and who devoted a lot of her time to administer our EURO k Conferences and Summer/Winter Institutes and who helped in further developing EURO as a whole. In Jan Weglarz time, the team of editors of EJOR changed, and the agreement with the publisher had to be renewed. Both activities can be considered as a full success. Many thanks to you, Valerie, and to you, Jan! As with any organization and in particular with an organization like EURO regarding its federal structure, one has to encounter internal and external affairs. Particularly with respect to the internal situation, I contributed some general thoughts in EURO Bulletin, Vol 8 (3) of last year. Let me therefore add some reflections here as to the external situation of EURO. 'External' can be understood at least in two directions. One is with respect to the general public, and the other has to do with other organizations in our area. As to the wider public, we are still following the idea of getting into closer contact with the EU. Since our new President-Elect is staying at the Free University of Brussels and has some close contacts to important persons of the European Commission, we can hope to be more successful in the future. As a second aspect, the EC firmly believes that, on a European level, a contact with practitioners is of high significance. We will therefore establish some closer links which will be announced at the Council in Budapest. Considering a third issue, i.e., the contact with the press, the Budapest Conference and EURO's 25th anniversary will give us an excellent opportunity to explore the facilities of a European press pool for scientific news which has recently been established.

As to the contacts with IFORS, the EC believes that the relationship to the non-European part of the world should be strengthened. EURO makes up half of the number of the member societies of IFORS and contributes about 10000 individual members, which is about 1/4 of the total individual membership of IFORS. Hence, the EC decided to support IFORS in its efforts to improve the situation of OR in developing countries. Increased efforts will be devoted to establish OR societies in eastern Europe and in Africa. In particular, EURO is also supporting activities that improve teaching in OR. Furthermore, EURO will give room for IFORS in its bulletin and will establish links on its web site to IFORS activities. In addition, the EURO Conferences will try to make the existence of IFORS more visible. This will be done by means of special streams under the auspices of IFORS and by an 'IFORS-EURO distinguished lecture'.

Concerning the internal affairs, all instruments like EURO k Conferences, Working groups, Summer/Winter Institutes, etc. are working smoothly and with success. However, the EC has the feeling that in addition to the Summer/Winter Institutes somewhat more should be provided for young researchers. Several activities are envisaged. One is to support young people to attend actively a working group meeting. Another activity might consist in a series of short doctoral workshops to be organized at an important research institute by young people themselves.

EURO is going to celebrate its 25th anniversary this year. More than ever, OR is capable to contribute to the welfare of the society as a whole. Let us seize this opportunity and let us bring in ourselves so that our educational and research activities may have the highest possible effect in improving the wellbeing of our world in the years to come.

Christoph Schneeweiss

Ethics and Operations Research

1. Introduction

What has Operations Research to do with ethics? Or, more generally, what has science to do with ethics? Should not science be free or at least intellectually be separable from moral norms as Max Weber [Weber] postulated? Indeed, being aware that Operations Research (OR) may be identified as the science of formal decision making, these questions are of particular significance for this discipline. Formal decision making has, in a very general way, to do with norms, and these norms are not simply exogenously given but essential objects of investigation.

One might therefore even ask: "What are the implications of OR with respect to ethics?" Or, in more operational terms: "Are the concepts of general systems theory, and more specifically, those of OR, appropriate to investigate ethical questions?"

As is well-known, ethics is usually defined as the science of moral norms. Morality, on its part, may be understood as the totality of all rules of a society to differentiate between "good and evil". These rules are deemed to be essential for the viability of a society. They provide a certain security and often enjoy a broad societal acceptance. Some of these rules are codified by law, particularly those that are easy to scrutinize.

Usually, one associates with moral behavior those actions that are banned by society but which are not or not yet punished or punishable by codified law. Typical examples for ethical issues are genetic manipulations or medical experiments with human beings, and the production of poison gas or nuclear weapons. But not only in the domain of the natural sciences one has ethical questions, in business administration, too, such questions arise. Think of the general problem of cheating, the free rider problem or untruthfulness as a marketing instrument. In principal agent theory (e.g., see [Bamberg/Spremann]), one even introduced technical terms like 'shirking' and 'moral hazard' to describe an opportunistic behavior that might occur in cases when an action is not observable; or, more precisely, when the (visible) consequences of an action cannot be attributed to particular action.

Obviously, looking at the applications of Operations Research, planning problems will often touch questions of moral concern as it is the case for other sciences as well. In what follows, we do not intend to discuss moral conflicts of a particular kind, rather we are aiming to investigate more conceptual questions concerning the interrelation between ethics and OR. In doing so, our starting point will be the general decision (or planning) process which seems to be rich enough to discuss some important methodological questions of ethics, such as:

- How do moral norms interfere with the decision process for a particular problem?
- What is the relationship between moral norms and rationality?
- How to deal with the problem of changing moral norms?

2. The Decision Process and its Ethical Implications

Operations Research as a pure science provides general insights and develops techniques and rules about modeling, optimization, and implementation. This general expertise may then, in a specific setting, be applied to real-life problems using in an interdisciplinary way, 'applied knowledge' of various other disciplines. Hence, as most sciences, Operations Research consists of a pure and an applied direction. As to the discussion of ethical questions, two scenarios seem to be of particular interest:

1. Short term effects, i.e., direct violations of moral norms, and
2. Long term effects, i.e., decisions (or better: omissions) which in the long run imply violations of moral norms.

The first scenario will be met more on the applied side of OR, whilst the second one touches more basic questions of research strategies and is of crucial significance for a science like Operations Research that has as its object of investigation the decision process itself. Both scenarios will be discussed as specific configurations within the general decision process.

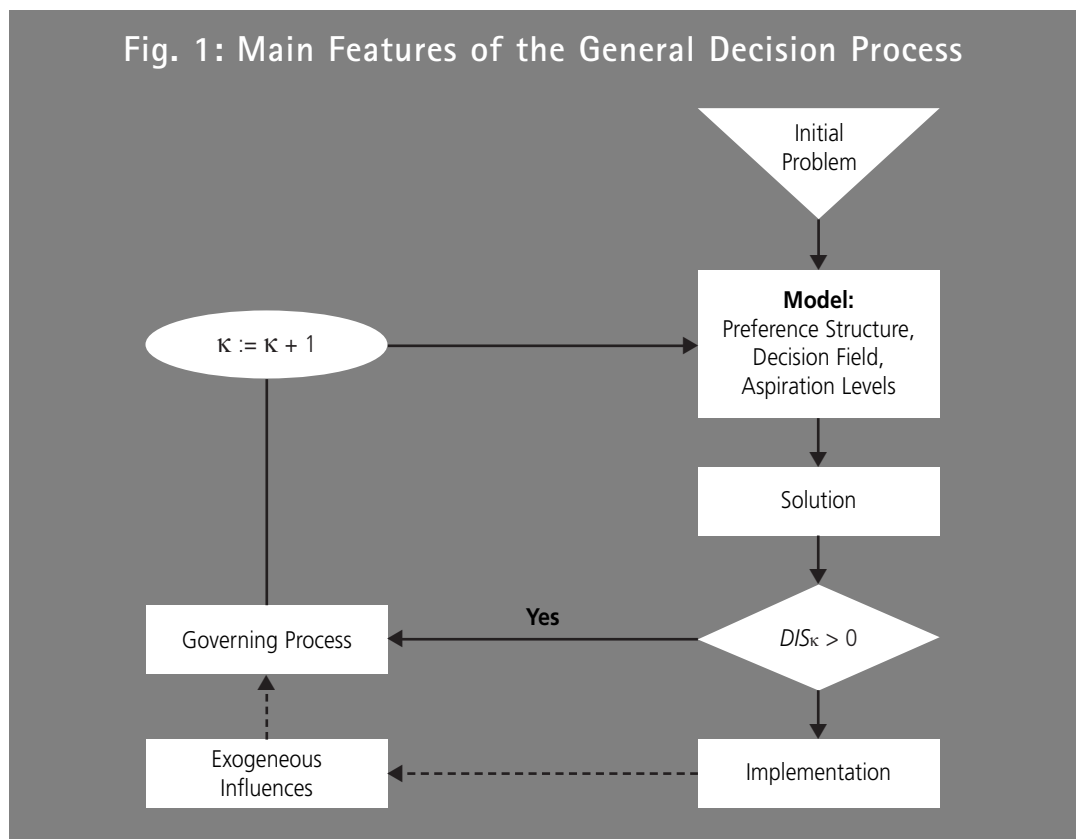
2.1. The General Decision Process

As mentioned before, the general decision process comprises all three major activities of OR, i.e., modeling a problem, generating a solution, and implementing the generated plan. In abstract terms the process may be understood as a sequence of decision models of which the pertaining decision fields and criteria are undergoing a permanent learning process. In this process several persons may be involved and the problem to be solved may change over time. Hence the decision process is to be discussed within a multi-person, multi-criterion, dynamic setting with asymmetric information and various hierarchical interdependencies. One of the key notions for the discussion to follow may be seen in the fact that the decision process is at the same time a goal seeking and a goal observing process. Operations Research, as a pure science, is analyzing this process and is particularly providing optimization techniques to contribute to its efficiency. Moreover, through its modeling techniques, it provides methods to construct preference systems. On the other hand, via an analyst or consultant, Operations Research as an applied science is part of the decision process

and thus is - at least partially - responsible for keeping moral norms. Since, for the subsequent discussion, a deeper understanding of some of the main features of the general decision process turns out to be crucial, let us illustrate this process somewhat further.

A decision process describes all stages, from an initial stimulus via various operationalizations up to a solution and its implementation. It is evolving in cycles of the type as illustrated in Fig. 1. Each cycle is defined by a description of the "problem" to be solved ("Model"), by a "Solution", and a "Discrepancy" (DIS) which provides the decision maker with some idea of how far apart the present solution is from the solution he is desiring. If a discrepancy is still existing, the decision maker has to select a new cycle (through his "Governing Process"). In particular, he has to decide whether he should change his preferences and especially his aspiration levels. Thus, obviously, depending on the kind of cycles one is selecting, the decision process is simultaneously a goal observing and a goal seeking process. (For a much deeper discussion of the general decision process, see [Schneeweiss (1987)] or [Schneeweiss (1992)].)

Fig. 1: Main Features of the General Decision Process



Using the general structure of the decision process to analyze ethical problems, one may identify moral norms with special aspiration levels which need not only be observed but, simultaneously, may be allowed for change. It clearly shows that the solution of a particular real-life problem might give rise to question the validity of certain moral norms and might even give rise to change these norms for future decision processes.

Particularly, in Section 3, we will continue this discussion on a more fundamental basis. For this general discussion, it should be clear that aspiration levels and (moral) constraints of the decision field can be very general quantities. Thus a prescribed decision rule, e.g., can in principle be considered as a moral norm.

2.2 Short Term and Long Term Scenarios

Let us come back to the two scenarios mentioned before. They may be considered as being associated with the goal observing (1) and the goal seeking (2) aspect of the Operations Research decision process. Let us deal with scenario first.

(1) Scenario 1, short term effects - goal observation

As any member of a society, Operations Research as an institution is compelled to observe moral norms. This seems to be obvious for day to day applications and is no specific problem of Operations Research but of those who apply it. Thus, professional groups like applied statisticians or the various associations of engineers possess an ethic committee which guarantees their clients a morally fair treatment.

Ethical questions become far more intricate, however, if moral norms are not yet settled or contradict to other moral norms. Concerning these questions, let us content ourselves with only two remarks:

- Not settled or contradictory moral norms have to be discussed within its particular context. What can be demanded from a science like Operations Research, however, is that it makes every effort to support the search for appropriate solutions and to explore their possible implications. In particular, it should employ its multi-person, multi-criterion decision techniques.

- Coming back to the postulate of Max Weber [Weber] mentioned in the introduction, ethical considerations should be separated from the subject under investigation or should at least be made explicit. The decision process proves to be especially appropriate to discuss such questions. As mentioned before, one might formulate moral norms as additional goals or as aspiration levels within a multi-criterion decision problem. We return to this point in the next section.

(2) Scenario 2, long term effects - goal seeking

Considering Operations Research as a pure science, one has not primarily the problem of not observing moral norms but far more the question of omissions that might imply non-moral behavior. This is an extremely intricate problem which points to the center of a science of decision making. Moral norms usually are conservative rules. They give society a certain security and focus on elementary human needs. Some of these rules, however, are subject to substantial change. Hence, in considering long term involvements, science, and in particular Operations Research, has to analyze moral rules themselves.

To elucidate the problems that might occur consider an omission which deliberately avoids a conflict with given moral norms. Assume further that this omission implies, at a future point in time, a catastrophe which necessitates to break traditional norms. Clearly, these traditional norms will then be sacrificed in view of the pressures inherent in the situation and no immorality would be involved. Hence only the cognizant scientist knows that he or she acted immorally.

These highly involved questions may again be discussed within the framework of the decision process. As explained before, the planning process may be considered as a learning process. This means that the decision fields are permanently changing and that preferences are to be adapted. This adaptation is caused on the one hand by the history of the process, i.e., by the experience one has gained thus far and on the other hand by external re-evaluations or the presumption of a possible change. A science of the decision process has to consider all these possibilities and has thoroughly to explore all possibilities in a given situation.

With these general remarks we arrive at a point which brings ethics and a decision science like Operations Research even closer together.

3. Ethics and Rationality

Obviously, since ethics discusses problems of discerning between "good and evil", it describes part of the preferences of a society and certainly has an impact on the criteria of the decision process. The relationship between ethics and the analysis of the decision process, however, turns out to be much more fundamental than one might suppose and cannot simply be described by extending the decision process by an additional criterion representing a moral norm. The key question is indeed rationality. Under which conditions might the decision process be considered to be rational?

Usually rationality has to do with welfare, i.e., with the welfare of the present and future generations. To achieve a rational solution, the decision process must have in mind the welfare of all parties involved. In its comprehensive meaning, this is of course almost impossible. Arrow's famous 'impossibility theorem' [Arrow] and the impossibility of 'rationally' aggregating ordinal data [Arrow/Raynaud] reveal some of the principle difficulties. In particular, it shows that one has to be content with a less arbutuous notion of rationality than that being usually employed in formal decision analysis: Within available resources, one has to explore all decision fields and criteria which might increase the well-being of the particular decision maker and of further parties concerned. Since the decision process is a goal seeking process, rationality cannot be defined in obeying certain goals. Thus one has to be satisfied with a "process or discourse rationality" (e.g., see [Habermas], [Ulrich]), which says that all activities are rational that follow logical arguments and obey commonly accepted rules of discourse. Indeed, this postulate is not too far from general considerations in ethics, and in particular from Kant's categorical imperative [Kant]. Thus, ethics and the analysis of the general (discourse) rationality of the decision process are closely related: rationality involves ethics and ethics might be discussed within a general discourse rationality.

However, rationality and moral norms are, of course, not identical. Let us stress only three points:

- Moral norms are primarily concerned with the conservation of existing (morally accepted) societal rules. Hence those actions are deemed as favorable that defend these rules which are felt to be indispensable. Activities which simply increase welfare (without breaking moral norms) are not considered as being of ethical relevance but would simply be viewed as being rational. The same holds for activities which might affect a moral status in the far reaching future. Rationality would have to consider these aspects as well. Hence moral norms are simple and often all too simple rules of a society bound to here and now, i.e., they are often simple aspiration levels assigned to only one cycle of the decision process that do not consider the entire development of the process in the future.

- Typical for many moral norms is their highly personal character. Deep emotions are often associated affecting the whole personality. Thus, a simple rationality concept as that of the "homo economicus" (e.g., Bernoulli rationality) would by no means be capable of capturing this far more general and comprehensive aspect of moral norms. Usually, however, Operations Research will have to do with less personal ethical questions. As an example think of the modern problem of sustainability. Planning a society's sustainable development implies activities which at least do not negatively effect the well-being of future generations and of socially discriminated groups. Hence, sustainability might be used to define more precisely in which kind of ethical problems OR might generally be involved.

- Ethical postulates and general rationality postulates differ also in the comprehensiveness of their content. Rationality has to consider not only ethical postulates but the specific properties of the particular problem one has to solve. To reconcile these two types of criteria, again the decision process gives a hint. One might adopt a two-stage consideration [Schneeweiss (1987), Sec. 6]. In a first stage, within a rather general framework, one would specify certain ethical norms which would then have to be observed on the lower level of the specific decision problem at hand. Thus this two-stage representation decouples the (ethical) nor-

mative rationality from the instrumental or purposive rationality ("Zweck-rationalität") and allows the lower stage considerable freedom. It should be clear, however, that ethical norms as additional criteria components do not only have an impact on the lower stage criteria but also on its decision field, or, more generally, on the whole process of finding a decision. Thus, the entire decision process finally grounds in moral postulates and cannot be discussed without considering ethical questions, and it is exactly in this context one should interpret Max Weber's postulate of a value-free science.

4. Conclusions

Within this short discourse on ethics and Operations Research, we emphasized that Operations Research is particularly concerned with ethical questions. These questions do not only arise in applying Operations Research to real-world problems but are a constituting part of OR as a normative science. Withdrawing to a position of a very general notion of rationality, ethics and the analysis of rationality are not too far apart. As a prerequisite, both for ethical considerations and for the general concept of rationality, the decision process is required to be thoroughly explored within an "oppression free" discourse [Ulrich], i.e., all possible scenarios and decisions should be considered and all their possible consequences should in principle be known by all parties being involved. Thus, the hitherto rather general considerations may result in some concrete desiderata. These desiderata ultimately result from the (moral) postulate of taking into account a general concept of rationality which considers the obedience to moral norms and their possible change. Thus following this general concept of rationality, all the subsequent suggestions put a particular problem into a more comprehensive perspective.

(1) Extend the scope of time

This particularly implies that the long term consequences of proposed decisions should be analyzed, having as an important effect that Operations Research should extend its activities from the operational to the strategic level.

(2) Extend the space of decision variables

This requirement tends into the same direction as the extension of the scope of time. Not only the

problem at hand should be considered, but all possible 'side effects' as well.

For a typical example that combines (1) and (2) consider the so-called rebound effect. For Operations Research the rebound effect says that saving certain resources in applying specific planning procedures often has as a consequence that having removed this one bottleneck other resources will be exploited even more. Obviously, the decision problem had been formulated within a too narrow perspective, and hence does not follow the postulate of general rationality.

(3) Extend the cultural perspective

This postulate primarily has to do with the multi-person character of the planning and implementation process. Particularly the claim of OR to be applicable for a multi-cultural society calls for its further extension into the field of distributed decision making.

(4) Extend the language of description

Obviously, in extending the perspectives of a planning problem, one often has to incorporate other than decision analytic descriptions. Hence, more general languages are necessary and, what is of crucial importance, in order to follow general rationality, these levels have to be connected with each other. Hierarchical planning might provide some general ideas how such an integration of different levels of description could be achieved (e.g., see [Schneeweiss (1999), Section 13]).

Considering proposals (1) to (4), ethical considerations necessitate at least an enhancement of a problem's perspectives. This results in a research strategy that expands OR from the operational, one person analytic paradigm to a more strategic, multi-person and less analytic stage of description. To provide efficient tools for this important step proves to be a major challenge.¹⁰ Ethics and OR for Operations Research.

Developing instruments to analyze complex situations and hence to be able to observe moral norms proves not only to be an essential postulate for OR as an area of research but for OR as an institutionalized science as well. Operations Research as an institution is responsible for the content of the education within its discipline. The ethical perspective finally results in the claim that education in OR should provide a comprehensive view of a

problem's solution which particularly takes into account all parties being involved and affected.

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EURO and Multicriteria Aid for Decisions in the Baltic States

The start of the official EURO activity in the Baltic States (Lithuania, Latvia, Estonia) could be considered the Special Conference on Simulation, Gaming, Training and Business Process Reengineering in Operations, held in September, 1996, in Riga (Latvia). During this Conference the Baltic Operation Research Society (BaltORS) has been established to co-ordinate the development of operations research and management science in the Baltic region. The Board of the BaltORS consists of six members, i.e. two representatives from each Baltic State. At present the President of the BaltORS is Prof. H. Pranevichius from the Kaunas University of Technology (Kaunas, Lithuania).

At present Baltic States have the status of countries in accession and after two-three years they will become full members of the European Union. Inclusion of Lithuania, Latvia, Estonia into various European structures, to scientific as well, is an important step in the process of European integration of the Baltic States. The EURO stimulates in many forms the co-operation in OR of people from different European countries. Since the EURO Working Groups are mainly virtual institutes that join specialists from the selected OR field, the BaltORS develops the activities in the EWG as well as in Special Conferences.

The 52nd Meeting of the EWG on Multicriteria Aid for Decisions is organised on September 5-6, 2000, in Vilnius, Lithuania (the co-ordinator of the Meeting is Dr. Leonidas Sakalauskas from the Institute of Mathematics and Informatics, Vilnius, Lithuania, see also the MCDM Calendar in the Newsletter of the International Society on MCDA, No 1, vol 13, and the <http://www.science.mii.lt/MCDA-52>). This meeting is exceptional in the calendar of EURO events, because it is a first Meeting of the EURO Working Group in the Baltic States and countries of the former Soviet Union. Organisation of this Meeting in Vilnius, geographically situated in the centre of Europe, is an important step for extension of EURO geography and for involvement of new members into the activities of operations research.

MCAD have certain traditions in Baltic States as well as in the other countries of Eastern Europe: the multicriteria problems of optimisation and classification have been considered in the Institute of Mathematics and Informatics (Vilnius) for many years, the multicriteria applications in engineering have been developed in the Vilnius and Riga Technical Universities, etc. Thus, the Meeting allows us to attract scientists from the Baltic states and Eastern Europe (from Lithuania, Latvia, Estonia, Belarus, Ukraine, Russia, Poland, etc.) into investigations and applications on multicriteria problems and operations research, to gather together those already working in such fields as well as to call well-known specialists from Europe and all the world to Lithuania.

The main theme of the Meeting is "Multicriteria Aid for Decisions in the National Infrastructure". Rapidly growing economics and integration in the European structures stimulate intensive investments for the development of modern infrastructure in the countries of accession. Here plays international co-operation in MCDA applications an important role. We encounter several problems in Lithuania and other neighbouring countries concerning the multicriteria analysis and decision making:

- transport transit (through the Baltic States between West and East or via Baltica with the Nordic countries, etc.);
- analysis of the development of energetics in the Baltic region taking into account the transit, supply and refinement of the oil as well as the problems of nuclear power stations;
- environmental/economic problems of sustainable development in the Baltic region.

The leading academical institutions and specialists of MCDA are involved in the organisation of the meeting. The Board of the BaltORS began the preparation of the meeting at the end of last year. The Institute of Mathematics and Informatics and the Vilnius Technical University support the meeting, the EURO and LAMSADE (France) also take part in its organisation. The Lithuanian State Foundation on Science and Studies has already decided on the financial sponsorship for the event. The

help and support of other local and international institutions are expected, too.

The sittings of the Meeting will be held in the Hall of the Academy of Sciences of Lithuania, located in the Old Town, centre of the Vilnius, at the address: Gedimino avenue, 3, Vilnius, Lithuania. The excursion to the Open-Air Museum of the Centre of Europe (19 km from Vilnius) is planned at the Saturday, October 7.

Welcome to the first EWG Meeting in the Baltic States and the Centre of Europe !

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EURO MEMBER SOCIETIES CORNER

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The Belarusian OR Society

Second Announcement and Call for Papers

International Workshop

Discrete optimization methods in scheduling and computer-aided design

September 5-6, 2000, Minsk, Belarus

<http://www.univ-troyes.fr/DOM/>

Organized by

- Institute of Engineering Cybernetics, National Academy of Sciences of Belarus (Minsk)
- Institute of Mathematics, National Academy of Sciences of Belarus (Minsk)
- University of Technology of Troyes (Troyes, France)
- Operational Research Society of Belarus with participation of the Association of European Operational Research Societies

Topics (sections)

- Scheduling
- Combinatorial Optimization
- Decomposition and Aggregation in Optimization
- Logical Design
- Root-Locus Methods in Interval Dynamic Control Systems

Program Committee

Jean-Marie Proth (Metz, France) - Chairman
 Jacek Blazewicz (Poznan, Poland)
 Peter Brucker (Osnabrueck, Germany)
 Rainer Burkard (Graz, Austria)
 Chengbin Chu (Troyes, France)
 Gerd Finke (Grenoble, France)
 Valery Gordon (Minsk, Belarus)
 Peter Reusch (Dortmund, Germany)
 Bernd Steinbach (Freiberg, Germany)
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Organizing Committee

Vjacheslav Tanaev (Minsk, Belarus) - Chairman
 Petr Bibilo (Minsk, Belarus)
 Alexandre Dolgui (Troyes, France)
 Nikolai Guschinsky (Minsk, Belarus)

Mikhail Kovalyov (Minsk, Belarus)
 Svetlana Kravchenko (Minsk, Belarus)
 Genrikh Levin (Minsk, Belarus)
 Mikolai Miacelski (Olsztyn, Poland)
 Yuri Sotskov (Minsk, Belarus)

Conference languages

English and Russian.

Conference venue

Institute of Engineering Cybernetics, National Academy of Sciences of Belarus (Minsk).

Pre-registration

Authors are requested to submit immediately to the Secretariat via e-mail (koval@newman.bas-net.by) the title of the paper, authors' names and affiliations (presenter must be indicated), an abstract of at most 150 words without mathematical symbols, and section name.

Submission of papers

Authors are requested to submit 3 hard camera-ready copies of the paper written in English and its electronic version in Word for Windows (.doc or rtf.-file) or LaTeX (ASCII file) by May 1, 2000, to the Secretariat of the Workshop (address for electronic version: koval@newman.bas-net.by). Paper length is limited to 6 pages including an abstract. Authors will be notified about acceptance by June 12, 2000. All papers accepted for presentation will appear in the Workshop Proceedings. Furthermore, a special issue of the International Journal of Mathematical Algorithms (see <http://www.gbhap.com/journals/262/262-top.htm>) will

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publish extended versions of the selected papers presented at the Workshop.

Instructions for authors

See site Web <http://www.univ-troyes.fr/DOM/>

Registration fee

Registration fee will be paid to the Secretariat at the beginning of the Workshop. The value of the registration fee is not decided yet but it will not exceed 100 US dollars. Registration fee covers publication of the Workshop Proceedings, organizing expenses and some social program.

Hotel reservation

Requests for the hotel reservation should be sent to the Secretariat by July 3, 2000.

Deadlines

Immediately - pre-registration
 May 1, 2000 - submission of papers
 June 12, 2000 - notification of acceptance
 July 3, 2000 - hotel reservation

Workshop Secretariat

Dr. Mikhail Y. Kovalyov
 Institute of Engineering Cybernetics
 National Academy of Sciences of Belarus
 Surganova Str. 6
 220012 Minsk, Belarus
 E-mail: koval@newman.bas-net.by
 Tel.: (375) (17) 2842171
 Fax: (375) (17) 2318403

Tourist information

Minsk is the capital of the Republic of Belarus and is the largest city of the country with about 2 million inhabitants. Several universities and a number of research institutes of the National Academy of Sciences have their campuses in Minsk. The city is situated approximately 600 km to the east of Warsaw and 700 km to the west of Moscow. Minsk is well reached by train and airplane from many European cities. Places of interest are world famous Byelorussian Opera and Ballet Theatre, Music and Drama Theatres, art and historical museums, shops selling products of traditional Byelorussian trades, wild nature surroundings of Minsk.

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The Croatian OR Society

8th International Conference on Operational Research KOI 2000
Rovinj, Croatia, September 27 – 29, 2000

Organized by

Croatian Operational Research Society, Zagreb
Department of Mathematics, University of Osijek

Cooperating Institutions

- Faculty of Economics, University of Osijek
- Faculty of Economics, University of Zagreb
- Faculty of Organization and Informatics, Varazdin, University of Zagreb
- Faculty of Electrical Engineering, University of Osijek

Under the Auspices of

- University "J.J.Strossmayer" of Osijek
- University of Zagreb
- Ministry of Science and Technology, Republic of Croatia
- Scientific Advisory Board - Ministry of Defence, Republic of Croatia
- Croatian Chamber of Commerce, Zagreb

Program Committee

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M.Alic, University of Zagreb
Z.Babic, University of Split
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L.Zadnik-Stirn, University of Ljubljana
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Organizing Committee

R. Scitovski, University of Osijek - chairman
A. Baumgartner, University of Osijek
M. Crnjac, University of Osijek
I. Fercec, University of Osijek
I. Galic, University of Osijek
R. Galic, University of Osijek
T. Hunjak, University of Zagreb
D. Jukic, University of Osijek
K. Soric, University of Zagreb
Z. Turkalj, University of Osijek
M. Zekic, University of Osijek

Conference Structure

Invited papers, contributed papers, posters, panel discussions, software presentations, workshops, exhibition of books and course materials.

Conference Languages

English and Croatian.

Sections:

1. Linear and Nonlinear Programming
2. Combinatorial and Discrete Optimization
3. Stochastic Models and Optimization
4. Scheduling
5. Macroeconomics, Economic Theory, Games
6. Statistics and Econometrics
7. Marketing and Data Analysis
8. Information and Decision Support Systems

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9. Banking, Finance, Insurance
10. Environment, Energy, Health
11. Neural Networks and Fuzzy Systems
12. Control Theory
13. Simulation
14. Practical OR and Applications

Abstracts

Authors who wish to present a work at the Conference should until July 1, 2000 by using e-mail address: koi2000@etfos.hr submit the title of the work and an extended abstract of not more than one page. Also, the names of authors as well as the names and addresses of institutions the authors come from should be given. At the conference site, each registered participant will receive a kit containing a detailed program, abstracts and addresses of authors. Up-to-date information about the Conference will be available at the website <http://www.etfos.hr/koi2000>. Please note that presentations at the conference are only possible if the speaker has registered and paid for the registration fee.

Papers

Authors who wish to have their paper published in the Conference Proceedings should submit three single-side copies of a paper (written in English) related to any Section of the Conference until September 29, 2000. Invited papers and original contributed papers reviewed and accepted by two independent referees will be published in the Conference Proceedings. A selection of published papers will also be recommended for publishing in the international journals:

CEJOR - Central European Journal for Operations Research;

CIT - Computing and Information Technology and Mathematical Communications.

The manuscript not longer than 10 A4-pages should be sent to Mailing Address. The first page should contain the article title, author's and coauthor(s)' name, affiliation, proposed running head (not more than 50 characters including spaces), an

abstract (not more than ten lines) and a list of keywords. Illustrations and tables should be sent on a separate sheet. Upon acceptance of the paper, authors should submit their TEX or LATEX file or a file written in any other text processor on a diskette or by using e-mail address: koi2000@etfos.hr. The authors will jointly receive 10 offprints free of charge.

Proceedings

Every registered participant is entitled to one free copy of the proceedings volume. These will be mailed shortly after the conference. The organizers will take care that the papers published in the Proceedings are cited in international databases as it was done with the Proceedings of the 6th and 7th International Conference on Operational Research.

Posters

Posters can present scientific or professional papers, contain information about an institution or a project, etc. Conference participants may bring their books or course materials that will be exhibited on a special place during the Conference.

Mailing Address

Prof.Dr.Rudolf Scitovski
Department of Mathematics
Trg Lava Mirskog 1/II
Hr-31 000 Osijek,
Croatia
Fax: ++385-31-211 637
E-mail: koi2000@etfos.hr
<http://www.etfos.hr/koi2000>

Registration Fee

Registration fee should be paid to: Odjel za matematiku Sveucilista u Osijeku, account no. 33600-609-63 (if the payment is done in HRK), i.e. Privredna banka Zagreb, account no. 7020-280-0682800-132344-240 (if the payment is done in DEM) with participant's name and obligatory designation "For the KOI 2000". Please send the receipt to the Mailing Address.

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	Before September 15, 2000	After September 15, 2000
	DEM 250,-	DEM 280,-
For CRORS members	DEM 200,-	DEM 220,-
For students	DEM 50,-	DEM 50,-

The registration fee includes a copy of the kit containing a detailed program, abstracts and addresses of authors, a free copy of the proceedings volume, and social program cost.

Social Program

Coctail, excursion and dinner

Accomodation

Hotel "Park", Rovinj

All prices are given per person daily. Residential tax: DEM 1.6 per person daily.

Deadlines

July 1, 2000 :

Registration forms and Abstract (by using e-mail)

August 1, 2000 :

Notification of acceptance of presentation at the conference

September 29, 2000 :

Full paper

September 20, 2000 :

Hotel accomodation forms

	Bed & Breakfast	Half-board	Full-board
Double room	DEM 36,-	DEM 42,-	DEM 54,-
Single room	DEM 48,-	DEM 54,-	DEM 66,-

The Israeli OR Society

Annual Meeting, Eilat, Israel
May 27-29 2000

ORSIS, the Israeli OR society, will hold its upcoming annual meeting at the Dan-Panorama Hotel, Eilat, Israel, on May 27-29 2000. Guests from overseas are welcome to participate. Please contact ORSIS

Secretary Israel David at idavid@black.bgu.ac.il for details. The program chair is David Perry (dperry@stat.haifa.ac.il). Our website is: <http://iew3.technion.ac.il:8080/Labs/Orsis/>.

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The Italian OR Society

AIRO - Optimization and Decision Sciences Announcement of Competition

Creation of a new AIRO Website and Guided Tour of Operations Research

Objectives

AIRO - The Italian Operations Research Society - Optimization and Decision Sciences, with the support of EURO - The Association of European Operational Research Societies - invites proposals for the creation of a new Website and guided tour presenting Operations Research. The proposals must include the information currently posted on the Internet at the address <http://www.airo.org>, organise this information in an original graphic format, set up a guided tour, and suggest possible new elements to be included in the AIRO Website. Particular importance will be given to the quality and innovative nature of the solutions proposed with respect to the current site.

Subject of the competition

Applicants must design and set up a Website which is easy to navigate and which includes all information provided in the current AIRO Website at the address <http://www.airo.org>. The information should be appropriately organised and structured in a series of pages, with proposals for possible new sections.

The site must include a guided tour which provides a presentation of Operations Research to students, and also firms or local bodies, possibly in a differentiated manner.

Both the Website and the guided tour must be in both Italian and English.

Participation in the competition

The competition is open to citizens of all countries belonging to EURO (<http://www.ulb.ac.be/euro/>). Participation is also open to scholastic institutions, groups of university or polytechnic students, and other groups of persons from countries belonging to

EURO, provided that a group leader is nominated. For the purposes of the competition, the group leader will be responsible for the proposal and the sole person with whom contact will be made.

In the case of selection of a group project, the prize money will be equally divided between the members of the group. If a candidate works for an institution, the assignment of the prize will be made wholly and exclusively in the name of the candidate.

All participants (individual or groups) may present more than one proposal. Each proposal should however be presented separately, and in accordance with the instructions given below.

Participation in the competition implies full and unconditional acceptance of the present regulations.

Registration

Registration for participation in the competition must be made to The Secretary, AIRO (Signora Agnese Martinoli, Via Serretto 1/4, I-16131 Genova, Italy) by fax (+39 010 3777703), letter or e-mail (segreteria@airo.org), by completing the application form below also available from the Secretariat of AIRO or on the Internet at URL http://www.airo.org/concorso_airo. All parts of the form must be filled in.

Contents of proposal

Candidates must present their proposals on CD-ROM. These must include:

- A new AIRO Website;
- A guided tour presenting Operations Research;
- Documents in pdf format relating to the structure of the Website and the guided tour.

Presentation of other material or of material in a form differing from the above is not admitted.

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The material must be presented anonymously. All proposals should however be marked with a reference code which identifies it. All components of the proposal must be marked with the same code. The details relating to the individual participant or group leader (the same data given on the registration form) must be specified on an identification sheet which should be inserted by the candidate in a non transparent sealed envelope, marked on the outside only with the chosen code. The envelope must be inserted in the same container in which the proposal is presented.

Composition of the jury

The jury is composed of three (3) members nominated by the Executive Council of AIRO. The members of the jury will elect a president from amongst themselves.

The jury will reach decisions through a majority vote and its decision will be considered valid even in the absence of one member. The task of the jury is to interpret the present regulations and apply them in the best way possible, defending the rights of participants, and taking into account the objective of the competition and the quality of the result.

For the purpose of judging the proposal of each participant or group of participants, the assessment will be divided equally between the Website and the guided tour.

As far as the Website is concerned, the characteristics taken into consideration will be, in order of importance, its structure and ease of navigation, and the graphical form.

As far as the guided tour is concerned, the characteristics taken into consideration will be, in order of importance, the contents, its structure and ease of navigation, and the graphical form. The guided tour can be presented in html, flash or shockwave. The decisions of the jury are final and without appeal. The evaluation of the material and assessment of the jury are confidential and will not be made known. The jury will apply selection criteria according to their own discretion. In the case of an equal vote, the vote of the president of the jury will be decisive.

Before the official proclamation of the winner, the envelope with details of the participants will be opened in order to verify the full entitlement of the winner of the competition to participate in the competition. In case of non entitlement, the next ranking applicant will be declared the winner. The jury reserves the right not to declare any winner, if the proposals are not considered satisfactory.

Terms and deadlines

The proposals must be delivered to the Secretary of AIRO (Signora Agnese Martinoli, Via Serretto 1/4, I-16131 Genova, Italy) by 12.00 am. on the 31/01/2001. In the case of deliveries made by post or by authorised carrier, the date stamp or delivery stamp will be accepted as proof of posting. However, proposals which arrive later than ten days after the competition deadline will not be accepted.

Prize

The winner, chosen by the jury among all participants in the competition, will receive the sum of 2,500 (two thousand five hundred) euros.

Publishing of information

AIRO reserves the right to publish the name of the winner or winners, together with a complete description of the project, photographs and illustrations. This will not however give the winner the right to any form of recompense other than the prize money. By signing the registration form, candidates authorise the reproduction and publication of their project. AIRO declines all responsibility for inaccuracy, errors and omissions in any reproduction or publication relating to the competition.

Announcement of results

The result of the jury's decision will be made known through AIRO's Website (<http://www.airo.org>) and in the bulletin AIRONews. Winners will also be informed directly by registered letter.

The presentation of the prize will take place during the Annual Conference of AIRO 'Giornate di Lavoro AIRO' in September 2001.

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Return of proposals

Proposals and documentation will not be returned to applicants.

AIRO declines all responsibility in case of loss, theft or destruction of the registration forms and/or any

associated documentation. This exclusion also applies to delays in postal delivery or other forms of communication. Registration in the competition implies acceptance of all conditions specified in the present announcement.

A P P L I C A T I O N F O R M

To the Secretary, AIRO - Signora Agnese Martinoli, Via Serretto 1/4, I-16131 Genova, Italy

I, the undersigned date of birth representing the group (not to be compiled by individual applicants) request to be admitted to the "Competition for the creation of a new Website for AIRO and guided tour of Operations Research" announced by AIRO (Associazione Italiana Ricerca Operativa-Optimization and Decision Sciences) and declare that I accept the conditions of the competition. The address for any communications relating to the organisation of the competition and notification in the case of being declared winners is the following:

Street

Town Province/Region

Post code Country

Tel. Fax E-mail

Date Signature

Law 675/96 - Protection of Privacy Act.

I, the undersigned, hereby declare that I authorise the use of personal data, according to Law 675/96, for the purposes necessary to participation in the competition for the "Creation of a new Website for AIRO and guided tour of Operations Research". The body authorised to process such data is AIRO. I nevertheless retain all rights specified under Article 13 (access, correction, cancellation, opposition to treatment, etc.), which can be exercised by contacting AIRO.

Signature.....

EURO events calendar

17-19/04/00	EWG	Project Management and Scheduling: Univ. of Osnabrueck, Germany pms2000@matematik.uni-osnabrueck.de
4-6/05/00	EWG	Financial Modelling: Trondheim, Norway Molenaar@few.eur.nl
18-20/05/00	EWG	ECCO: Capri, Italy http://www.ecco2000.unina.it/ecco2000.html Van-Dat.Cung@prism.uvsq.fr
8-10/06/00	EWG	Decision Support Systems: 11th annual meeting of the EURO Working Group on Decision Support Systems. Toulouse, France zarate@irit.fr
14-16/06/00	EWG	PAREO: Second international Workshop of the PAREO working group on Parallel Processing in Operations Research. Paderborn, Germany pareo@uni-paderborn.de http://www.uni-paderborn.de/~PAREO2000
4-7/07/00	EWG	Group and Negotiation Decision Support: Glasgow, Scotland Fran@mansci.strath.ac.uk http://www.cbe.wvu.edu/gdn/GDN2000.html
16-19/07/00	EURO XVII	Budapest, Hungary hencsey@sztaki.uk http://www.sztaki.hu/conferences/euro17/
31/07-4/08/00	EWG	ORAHS: Glasgow, Scotland jri@gcal.ac.uk
16-18/08/2000	EWG	WATT: PATAT2000, The 3rd international conference on the Practice and Theory of Automated Timetabling. erben@fh-konstanz.de/patat2000/ http://www.asap.cs.nott.ac.uk/ASAP/ttg/patat-index.html
12-15/09/00	EWG	Transportation: 8th Meeting, Rome, Italy bielli@iasi.rm.cnr.it http://pft2.iasi.rm.cnr.it/ewgt/homen.html
5-6/10/00	EWG	Aid for Multicriteria Decisions: 52nd Meeting, Vilnius, Lithuania roy@lamsade.dauphine.fr http://http://www.science.mii.lt/MCDA-52
16-17/11/00	EWG	Financial Modelling: New York, USA Molenaar@few.eur.nl
14-17/12/00	EWG	Locational Analysis: Barcelona, Spain daniel.serra@econ.upf.es
9-11/07/01	EURO XVIII	http://www.euro2001.org : Rotterdam, The Netherlands

If you want to add any EURO event, please contact the EURO Office (euro@ulb.ac.be).

ESWI: EURO Summer & Winter Institute ■ **EURO-k:** EURO Conference ■ **EURO Prime:** EURO Prime Conference ■ **EWG:** EURO Working Group Meeting ■ **Mini EURO:** Mini EURO Conference

EURO XVII

17th European Conference on Operational Research

Budapest, Hungary, July 16-19, 2000
<http://www.sztaki.hu/conferences/euro17>

OR FOR A UNITED EUROPE 25th Anniversary of EURO

Hosted by The Hungarian Operational Research Society (HORS)

"EURI XVII Secretariat", c/o Viktor Richter
Computer and Automation Research Institute,
Hungarian Academy of Sciences
Kende u. 13-17, H-1111 Budapest, Hungary
Fax: +361 386 9378 - E-mail: richter@sztaki.hu
<http://www.sztaki.hu/conferences/euro17>

Important dates

Notification of abstract acceptance	1 March 2000
Second Announcement and Preliminary Programme	1 April 2000
Deadline for early registration	15 May 2000
Final Programme	1 June 2000
Conference.....	16-19 July 2000