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IFORS: THE CATALYST FOR OPERATIONS RESEARCH WORLDWIDE

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This is an article about IFORS, the International Federation of Operational Research Societies: what it is, what it does, and how it goes about its business in promoting and disseminating operations research throughout the world.

Need for IFORS

Before answering these questions about IFORS, I would first like to set the stage of why we need such a worldwide federation. We all are well aware that the United States is struggling to maintain a leadership position in the world of commerce, as well perhaps, in the world of politics and power. The food we eat, the materials we read or see and indeed our language are continually becoming more worldwide. International change affects us daily in many personal ways. This is also true about the problems we work on and how we view those problems. Operations research was born in a world at war and it made great strides. Now operations research is playing a major role in a world of competition and governmental changes. As governments' prioritize and deregulate their industries, national and international competition increase, operations research plays an increasingly important role in finding efficient, effective solutions to many industrial and societal problems.

We all are well aware that the basic language of operations research is a language of mathematics and modelling and is in its own way already a worldwide language. Through this media, we communicate effectively across all national boundaries, but as we tackle more broadly based problems which may be messy, containing many aspects of human organization and behavior, the languages we use and speak are not as universal. The same words carry different meanings in different languages; people follow different cultural patterns and norms. For example, in the United States the color white is a color of happiness and joy at births, christenings and weddings, but in China white is a color of death and sadness and funerals. If such a simple concept as color has such widely varying meanings in different cultures, it is clear that as companies and governments become more multinational and international in their world view, communication among people working on these problems is critical in order to avoid errors and misunderstandings.

What does all this mean for operations research? For one thing, all of our universities are internationalizing their curricula in the business disciplines and many of the social sciences. Since many OR problems are based in the environment of business and social sciences, we as individuals and ORSA as a society must continually take on a more international mind set as we tackle OR problems. We also must continue to educate young men and women from other countries who go back to do OR in their native lands. Since they know their native cultures and norms they are able to adopt, adapt and extend our approaches to fit the situation. But, to be even more effective in helping to internationalize our universities and businesses and to educate our own and foreign students, we need to spend more time and effort to understand the foreign cultures and norms.

Over the last few years we have seen change within the society. Our meetings have more international substantive content and ORSA is working more closely with other societies in North America and Europe. Many of our members who work in the area of operations management have learned a great deal from our Japanese colleagues in how to better run manufacturing and service industries. However, it is difficult for a national society such as ORSA alone to promote fully this international perspective. ORSA must necessarily deal with local and intra-international issues in its operations, goals and strategies.

Our early leaders saw the national boundary limitations of each of their societies. In 1957 many of these leaders from Britain, France and the United States met in the first international OR conference and created the

concept of IFORS. This concept became reality in 1959. Leaders from other countries, which had already formed operations research societies quickly appreciated this move to form an international federation and rapidly joined IFORS, so that by 1962 there were 14 member countries. At the present, IFORS now has 36 member societies and we are still growing. Mexico has just formed an operations research society and will be making an application to IFORS membership (at the end of this article I have appended a current list of IFORS member countries).

Mission and Goals

The mission of IFORS is to develop operational research as a unified science and to advance operations research in all nations of the world. In order to achieve this mission, six goals were established in the IFORS statutes. The Federation will:

1. Sponsor international conferences and meetings
2. Provide other means for the exchange of information on operational research between nations
3. Encourage the establishment of national operations research societies
4. Maintain standards of competence in operations research
5. Encourage the teaching of operational research
6. Promote the development of specific parts of operational research and encourage the development of new fields

For 30 years, the leaders of IFORS and the leaders and members of the operational research societies throughout the world have been working to fulfill this mission in accordance with these goals.

IFORS Organizational Structure

IFORS, although its mission is large, is organizationally small. IFORS is managed primarily through an administrative committee which now consists of the president (William P. Pierskalla), the past president (Jacque Lesourne), the vice president at large (Luis Tavares), four regional vice presidents (Peter Bell, Jean Pierre Brans, Roberto Galvao and RHA Woong-Bae), all of whom are elected by the member societies, and the secretary (Helle Welling) and the treasurer (David Schrady) appointed by the elected members of the administrative committee. All of these individuals serve a three year term. The business office of IFORS is maintained in the office of the secretary and we are indeed very fortunate to have a very dynamic and effective secretary in Helle Welling. Helle acts as a continuous contact point for all IFORS member societies and has great responsibility in the organization of all IFORS activities.

IFORS accomplishes its mission through four regional groupings of the member societies as well as the member societies themselves and through several committees. The present regional groupings are:

1. EURO: The Association of European Operational Research Societies within IFORS (all European and Middle Eastern OR Societies)
2. APORS: The Associate of Asian Pacific Operational Research Societies within IFORS (Australia, PR China, Hong Kong, India, Japan, Korea, New Zealand and Singapore)
3. ALIO: The Association Latino-Ibero-Americana de Investigation Operativa (Argentina, Brazil, Chile, Portugal and Spain)

4. NORAM: The Association of North American Operations Research Societies within IFORS (Canada and the United States)

These regional groupings hold meetings on a regular basis and in this past year EURO held its meeting in Paris, APORS in Seoul, and ALIO in Rio de Janeiro. IFORS itself hosts a triennial meeting which was held in 1987 in Buenos Aires and will be held from June 25-29 in 1990 in Athens, Greece. The host national society acts as IFORS agent in arranging the conference and IFORS appoints an international program committee responsible for the conference program and review of papers. Each national society is invited to sponsor at least one major paper. Selected papers from the conference are published in a proceedings.

The new regional groupings will enable IFORS to achieve its mission in a more effective manner. Already many other countries which currently do not have operations research societies are discussing the possibility of forming such societies. The regional meetings facilitate communication within the region as OR workers from various countries are more easily able to attend these meetings.

As a federation, IFORS is a democratic organization under the control of its member societies. Each national society has a voting power on all issues equal to the square root of its qualified membership. The square root rule was chosen so that the very largest countries would not totally dominate the federation. Therefore even the smallest countries have a significant voice and vote. For example, if total qualified membership alone were used as a voting criteria, then the United States, the United Kingdom and Japan would have over 50% of the voting power, but with the square root rule, to obtain 50% one would need all of the votes of the eleven largest societies. This voting is exercised by the IFORS representatives from each national society. The IFORS representative from the society is also the main contact between IFORS and the national society. At the present time, the total qualified membership in all of the IFORS national societies is approximately 30,000 members.

IFORS also maintains relationships with United Nations agencies, kindred member societies, which at the present time consist of AGIFORS: The Airline Group of IFORS, CORH: The Committee on Operations Research in Hungary, FOR: Fellowship for Operational Research, IACP: Investment Advisory Center of Pakistan, MPS: The Mathematical Programming Society, and TIMS: The Institute of Management Sciences. In addition, IFORS itself is a member of a Five International Associations Coordinating Committee (FIACC).

Publications

IFORS has several publishing activities. The first is the International Abstracts in Operations Research (IAOR) which began publishing in September of 1960 and continues today. The second is the monthly news bulletin written and compiled by the IFORS secretary, Helle Welling, which contains international news on conferences and other events. Every national society receives a copy of this bulletin through its IFORS representative. Most publish important aspects from the bulletin in their own society newsletters. Accompanying the monthly bulletin, over the past few years, the presidents and vice presidents of IFORS have frequently published letters ranging from broad philosophical discussions of operations research to specific approaches and problems which need examination utilizing OR approaches. Finally, following the Buenos Aires meeting in 1987, IFORS has begun publication of the IFORS education newsletter which seeks to promote the educational goals of IFORS.

At the present time, operations research throughout the world is in a healthy and vigorous state. The Regional groupings are promoting a broader international dimension to operations research. The triennial meeting of IFORS does this also. These regional and international meetings are beginning to have a major influence in the national meetings of the member societies. The future prosperity of ORSA and our ability to handle multinational issues is bound very closely to IFORS' future and the future of operations research in the world. The more innovation which comes from the members of our national societies, the more it will flow on through the various IFORS organizations to other national societies. I firmly believe that the field of operations research is now on an upswing. There are many reasons for this which I will discuss in a different place and a different time. However, much of our current success comes from the fact that we are now realizing and seeing

a tremendous upsurge in the contributions from OR workers all over the world, ranging from the deepest theory to the broadest applications involving large messy complex problems.

List of IFORS National Member Societies' Countries:

Argentina	Germany	New Zealand
Australia	Greece	Norway
Austria	Hong Kong	Portugal
Belgium	Iceland	Singapore
Brazil	India	South Africa
Canada	Ireland	Spain
Chile	Israel	Sweden
China	Italy	Switzerland
Denmark	Japan	Turkey
Egypt	Korea	United Kingdom
Finland	Malaysia	United States
France	The Netherlands	Yugoslavia