

ORSP NEWSLETTER

APRIL 2001

OR Experts Show the Way to Enhanced Profits

ORSP mounted a very successful seminar, "Enhancing Profitability through Operations Research" last December 6, 2000 at The Peninsula Manila to an audience of 35 composed of businessmen, managers, IT professionals, academicians, OR analysts, and oth-

who provided an overview of what OR is all about and where it could be applied. This provided a good background and introduction to the rest of the sessions that followed. She was followed by Noli Macalalag, a consultant at the OR Depart-



ORSP seminar speakers Emmanuel Macalalag, JC Mercado, Elise del Rosario, Dennis Beng Hui and Rizaldy Capulong line up outside the Peninsula Manila function room.

ers. The speakers consisted mainly of the ORSP Board Members, who are the best that the Philippines has in terms of the subjects that each of them tackled.

The session was opened by ORSP co-founder and IFORS Vice President Elise del Rosario,

ment of the San Miguel Corporation. His experience on the various manufacturing and logistics issues faced by a big company such as SMC brought out the seemingly endless OR applications that are possible and had actually been done. (CONT on p4)

ORSP WELCOMES NEW MEMBERS

Congratulations are due to the following members who filed their applications for membership for the period May 2000 to the present:

Joel Alforja -Skycablenet
Homer Alcon- Philips Semiconductors
Arlyn Angco- Tarlac State University
Vickie Antallan-Tarlac State University
Maria Theresa Bonantli -Polytechnic University of the Philippines
Maria Christina Fontanosa-Coca-Cola Bottlers Philippines
Richard Li-De La Salle University
Mariam Necesito-Mapua Institute of Technology
Rosemarie Seva-De La Salle University

These members will take their membership oath during the May 4, 2001 General Assembly meeting at The Peninsula Manila. (see page 5). Membership brings with it discounted member rates at the ORSP seminar offerings, subscriptions to this newsletter and the Philippine Journal of Operations Research, and participation as consultants to the ORSP CORPS, an ORSP response to the calls for civil society to help in nation-building. ORSP Corps helps to promote the use of optimization in government.

ORSP looks to these new members to lead the ORSP of tomorrow, and continue the work it has started since 1987.

FEBRUARY 24: OR STUDENTS' DAY

Student Congress in the Morning...

ORSP Youth Congress 2001

The ORSP Youth Congress held at the National Engineering Center on February 24 drew a sizeable crowd of students and faculty from various schools including Adamson University, Ateneo De Manila University, Central Colleges of the Philippines, De La Salle University, Mapua Institute of Technology, Polytechnic University of the Philippines, Tarlac State University, University of the Philippines-Diliman, University of the Philippines-Los Banos and University of Santo Tomas.

In line with the theme of the Con-

gress "Benefits and Relevance of Operations Research to the Society", lectures on OR applications were delivered in parallel sessions by no less than the officers of the ORSP Board who are OR experts and practitioners in their own right. Prof. Dennis Beng Hui, ORSP President, gave an interesting talk on the "System Dynamics Perspective of the Philippine Budget Deficit". Mr. JC Mercado, ORSP Vice President, presented an application of operations research in the telecommunications industry via the topic "Network Design for a Multi-POP ISP." Mr. Wilson W. Tiu, ORSP past president and cur-

rent director, gave a revealing insight into "OR Interventions in the Public Sector."

The ORSP Youth Congress was made possible through the collective efforts of the student chapters of Adamson University, UST, Mapua, and De La Salle University who constitute the core group for the activity.

Leading the student organizers for the event were Anette Poebe Young from De La Salle University, Lisette Lachica from University of Santo Thomas, and Magnolia Detras from Adamson Uni-

... And Quiz Show in the Afternoon

Ateneo Dominates 11th OR Quiz

The Operations Research Quiz was held at National Center for Transportation Studies in the afternoon of February 24.

The excitement at the start of the quiz show faded as scores for the preliminary round showed the clear dominance of Ateneo University over the other contestants. Towards the end, only the second and third place positions were up for grabs.

In the end, Ateneo de Manila University emerged as quiz champion with 390 pts. while University of the Philippines-Los Banos and De La Salle University placed second and third, with 290 pts. and 270 pts. respectively. For the first time, UP Diliman was eased out of the magic three by UP Los Banos, a first-time entrant to the quiz.

Other participating schools were University of Santo Tomas, Adamson

University, Mapua Institute of Technology, and Polytechnic University of the Philippines. The winning schools received trophies. Individual medals were awarded to the top three teams. The board of judges

was composed of Elise del Rosario, as Chair, President Dennis Beng Hui, and Ruby Pineda-Henson, ORSP Director in charge of Student Chapter Activities.



Winning teams with their coaches from ADMU, DLSU and UP-LB are all smiles with D. Beng Hui, E. del Rosario and Ruby Pineda-Henson in the center.

Bureau of Customs Work Caps Year 2000 ORSP Corps Projects

For the ORSP Corps, Year 2000 was ushered in with work on the Privatization of the Manila North Harbor, followed by the Bureau of Customs work. Work in this bureau has kept the ORSP Corps busy until the end of the year, into 2001.

It will be recalled that the ORSP Corps was established in November, 1999 to bring to a reality the mission of ORSP: to help in nation building through the use of the best optimizing tool there is - Operations Research.

After the Manila North Harbor Study undertaken by Elise del Rosario and Wilson Wy Tiu came the Evaluation of the BOC Shift to the Transaction Value System, carried out by Elise del Rosario and JC Mercado. This was followed by the Analysis of Private Sector Complaints on the BOC, again undertaken by E. del Rosario, JC Mercado and Dennis Beng Hui. This knowledge of the team on BOC matters has prompted the Philippine Chamber of Commerce and Industry to commission it for another BOC project, this time, involving the streamlin-



ing and evaluation of the entry encoding facility that it operates at the BOC.

Unlike the other projects which did not involve any payments, ORSP benefited from the consultancy fee paid for this project. This enabled the hiring of analysts from the De La Salle University, namely, Don Naranjo, Joyce Yang and Michael Tuason, who, in turn were supervised by E. del Rosario and Dennis Beng Hui. The project started in October and is due for presentation in March, 2001.

Various aspects of the operation were looked into and time studies and simulation were extensively applied to determine optimum manning complement levels. The project was able to show significant potential savings.

The Board has agreed to form a Trust Fund from the proceeds of this project, that would in turn, go to finance or jumpstart other government projects that the ORSP Corps will take on.

The ORSP Corps needs volunteer consultants!

For those who are interested, please fax your resume and area of interest to ORSP Corps Chairperson Elise del Rosario at Fax No. 920-7414 or email it to e.delrosario@pacific.net.ph.

You may also talk to Tina Domingo, ORSP Secretariat at 920-0101 loc 153 for more information.

At Your Service: Introducing our New Secretariat

If you have called the ORSP office lately, you would have been greeted with the efficient yet helpful voice of ORSP's new administrative secretary, Christina Domingo. Tina joined the ORSP last January and has since been following you up on your membership dues, arranging the OR Quiz, and keeping the books and files of the Society in order. A product of the Our Lord's Grace Montessori and AMA Computer College, she has proven to be an invaluable help in running the Society's affairs.

If you need anything, don't hesitate to get in touch with her at the ORSP office:

National Computer Center
Carlos P. Garcia Ave., UP
Diliman Campus Q.C.
Tel No. : 920-0101 loc 153
Fax No.: (632) 924-7414
Email : orsp-sec@skyinet.net



Tina Domingo

ORSP VP Mercado Presents Philippine National Contribution in Japan

With the support of Daiwa House (www.daiwahouse.co.jp), the Operations Research Society of Japan organized the 2nd annual APORS session as part of its annual conference. Young OR researchers (under 40) from the different Asia-Pacific Operations Research Societies (APORS) member countries presented a diverse set of papers from the more theoretical to the easily applied, including were extended scholarships in the form of travel and living allowance for the duration of the ORSJ Conference. A presentation on a Genetic

Algorithm application for a management framework used for the construction of Singapore, a project the Kuala (CONTINUED TO p8)



JC Mercado joins other Asian delegates to the ORSJ Conference.

OR Experts Show the Way to Enhanced Profits (CONTINUED from page 1)

Another aspect of OR applications was tackled by the President of SVI Billing Solutions, Inc., Vic Reventar. He focused on Neural Networks and the Portfolio Theory, as well as a specific allocation and distribution model used to optimize an investment portfolio. He also discussed the methodology and application of Decision Analysis. His presentation featured a highly interesting demonstration of the software that can be used to implement the theories he presented. ORSP President and DLSU Professor Dennis Beng Hui then gave a "soft" introduction to linear and integer programming as well as simulation. The use of the software was featured, which brought out the knowledge of the audience through their questions.

E. del Rosario, who shared wisdom not found in books – about the components of a successful OR practice and OR group. Her practical experience as the former Vice President of an award-winning OR practice of OR at San Miguel made her the obvious choice for this topic. The program was anchored by Beng Manalang, ORSP Board

Director from DLSU.

The feedback form gathered from the participants suggested a very resounding success for the seminar, and generated a lot of suggestions for future offerings. Financially, it also generated funds with which to carry out the society's future activities.



Participants listen attentively to speakers.

The seminar was concluded by

At May 4 General Assembly **Distinguished Speakers Tackle Supply Chain Issues**



Mr. Alexander Hipolito is a Sr. SCM Consultant at HP Consulting, Singapore.



Mr. Jaime del Rosario is the President of Accenture Philippines.

Management of the supply chain has evolved from an emphasis on integrating logistics and lowering costs to providing better products and services to customers quickly and cheaply. In both scenarios, Operations Research has consistently played an important part in the optimization of the supply chain. It is but fitting that the upcoming General Assembly will tackle this very important topic. Operations Research members will have the opportunity of hearing the two best consultants in the area, in the persons of Jaime "Bing" del Rosario and Alex Hipolito.

ORSP boasts of having a "direct access" to Bing del Rosario, a most-sought after speaker, business consultant, columnist of the Business World and President of Accenture (formerly Andersen Consulting) through his wife, ORSP founder Elise.

Alexander Hipolito is a former ORSP Board Member the guest speaker for the event and currently Senior Section Manager of Motorola Communications Philippines. Previous to this, he worked for the BAAN Group of the Netherlands and taught graduate OR and IT courses at the UP Math Department; was also a consultant on large scale optimization and conducted training programs on various optimization software. His talk will focus on OR in E-Business— Focus on Supply Chain Management and Optimization.

Hipolito's presentation will give an overview of supply chain optimization (SCO) systems also known as Advanced Planning and Scheduling (APS). The main objective is to provide an understanding of models and techniques behind SCO systems like i2 Rhythm, SAP APO, Oracle APS, etc. The presentation will highlight how SCO systems are heavily based on operations research advances, techniques, and method-

ologies in optimizing and coordinating the use of limited resources, improving on-time delivery and service levels while reducing costs and inventories. The presentation concludes with a discussion on lessons learned from the speaker's SCO implementation experiences in semiconductor and high tech electronics industries.

Del Rosario's talk, on the other hand, focuses on another aspect of the supply chain, namely, collaborative forecasting, planning, and replenishment. While the mathematical methods of OR can help tame forecast errors, variabilities in lead time, stock outs and manufacturing spikes and valleys, the collaboration approach is seen to make the application of OR methods even more effective.

Everyone is enjoined to attend this rare opportunity of learning more about e-business and the supply chain while renewing ties with fellow members and guests of the ORSP.

The General Assembly will be held on May 4, 2001 at The Peninsula Manila. **Buffet dinner will be served at 7:00 pm.** Members and non-members are welcome. Please reserve your slots early by filling in the form below.

RESERVATION SLIP

WHAT : ORSP GENERAL ASSEMBLY
WHEN : May 4, 2001
WHERE : The Peninsula Manila
TIME : 6:00 pm-Registration
PAYMENT : ☐ Member P 1,000
☐ Non-Member P 1,200

NAME : _____ SIGNATURE : _____
TEL NO. : _____ FAX NO. : _____
MAILING ADDRESS : _____

Form of Payment :

- ☐ Check for collection on _____
- ☐ Deposit to BPI Bank, Acct. No. 0201-0409-06
(Pls. FAX copy of deposit slip)
- ☐ Cash for collection on _____

Please send form to Tina at fax number 9207414 or call 9200101 loc 153 on or before April 30, 2001.

Del Rosario Keynotes Operations Research Society of South Africa National Conference

Elise del Rosario, Chair of ORSP Corps, keynoted the Operations Research Society of South Africa (ORSSA) National Conference from September 10 to 12 last year. The Conference was held at the BellvillePark Campus, University of Stellenbosch. She delivered the opening Plenary talk on OR applications in practice, as well as discussed the formulation and application of an allocation problem during the closing ceremonies. In one other plenary session, she tackled the role of the

International Federation of OR Societies (IFORS) in OR for developing countries. In relation to this, she gave inputs to the preparations for the International Conference on OR in Development IV (ICORD IV) which will be held at Berg-en-Dal, Kruger National Park, South Africa, from May 16 to 18, 2001. It will be remembered that ICORD II was held in Manila in 1997.

While in South Africa, del Rosario

shared experiences on the work being done by the ORSP Corps. ORSSA has been planning a similar initiative and the ways by which this could be started was discussed with the ORSSA members. Subsequently, she visited the University of Cape Town, where with the faculty of the Department of Statistical Sciences, led by Theo Stewart, she was updated on the various projects being handled by the University on the areas of health and infrastructure. Multi-criteria decision analysis (MCDA) was extensively used in work involving water resources planning. Through the invitation of Professors Philip Fourie and Jan van Vuuren, the University of Stellenbosch was the next stop. Here, she gave inputs on the areas that could make the training of OR students more fruitful in view of their using their knowledge in practice. Here, there was substantial discussion on the importance of consulting skills for OR practitioners. She also shared some OR consulting tips with students.



E. del Rosario poses with Prof. Jan van Vuuren and his associates at the scenic campus of University of Stellenbosch

ORSP Represented in Budapest European Conference



Elise del Rosario attended the 17th Euro Conference held last July 16 to 19 in Budapest, Hungary. Her primary role was to attend the IFORS Administrative Committee Meeting. By the end of the meeting, IFORS President Andres Wein-

traub of Chile and VP Graham Rand of UK turned over control to the new AC, headed by President Paolo Toth of Italy and the Philippines own Elise del Rosario as VP.

While there was expectedly minimum Asian presence among the 550 delegates, del Rosario nevertheless expressed some Asian perspectives in the various forums and paper presentations she attended. With the theme "OR for a United Europe", the

conference streams were on MCDA, Combinatorial Optimization, Stochastic Programming, Mathematical Programming, Data Envelopment analysis, Artificial Intelligence and Expert systems, among others. Plenary sessions included a stimulating perspective on OR, Ethics, and Decision, by Pierre Brans as well as a very-well received talk by George Nemhauser on Large-Scale Discrete Optimization in Airline Scheduling.

OR INTERVENTIONS IN THE PUBLIC SECTOR

(Excerpt from Feb 24 Student Congress speech delivered by ORSP Past President and DTI Consultant Wilson Wy Tiu)

Since the subject today is operations research, my talk today must necessarily deal with numbers and how to use them.

In some government offices, it is crucial that each of the 37 pingpong balls are carefully weighed such that the selected numbers will nearly always come out. Or else the bankers and operators will go bankrupt, and the bingo 2 balls will be pre-terminated by another impeachment trial. There is obviously operations research somewhere, but I will leave it to you to figure it out for yourselves when the next impeachment trial will take place.

Have I confused you enough? Are you wondering why such distinguished persons like Elise and Dennis would ask me to address you this morning? Or why they had mistakenly elected me president of the prestigious ORSP last year?

Why?

Simple! Where I now work may be described by one simple word - confusion - and a lot of them. The decisions are rarely logical, and I am not referring to the weather bureau either. In order to hide our shortcomings, we called the decisions we make as political in nature.

Let me give you one illustration. We know that government is running a budget deficit. This has been going on for several years already, and expected to go on for another millennium. So what is the solution to the deficit. One way is to cut down the bureaucracy and its attendant cost. So they passed the so-called Attrition Law several years ago. The word "attrition" is obviously a picture word intended to send a very strong signal to government employees, especially those in the executive branch. To make the law work, i.e. through the reduction of workforce, employees had to be trained and retrained. This naturally requires new budgets and more deficits. By the time these employees were believed to properly retooled, the law expired.

There were many confusions caused by the Attrition Law. Suffice it to say that it did not work and caused more deficit spendings. But the public would not let off, so a new executive order was issued to freeze any new hirings by government.



W. Wy Tiu giving a speech in one of the ORSP-sponsored Kapihans

At first, it made sense to many. It sounds logical that since the personnel cannot be laid off due to their civil service status, agencies will simply not hire new replacements for those who retired. The same Order also stated that when an office is not staffed over a certain length of time, it is automatically deemed abolished.

Thus for those who deal with the government often, somehow they would still be surprised by the new mode of close-open-closedness. Meanwhile, about 70% of the public administration graduates from the University of the Philippines could not find jobs in the government, and I was told some of them actually had to hide their faces to work in white and blue collar jobs.

Because of this stupid freeze-hire order, government is stuck with a bunch of old and dirty personnel who would panic at the sight of a computer. On the other hand, as the security of employment is threatened. Since such office connotes some form of power, the person would reasonably resort to graft and corruption as the insurance for the future. So public service has nowhere to go, but down.

What does this have to do with operations research? We see the chain of causes and effects of a solution applied to a problem that was not carefully analyzed. Not only that analytical techniques were not employed, and perhaps the freeze-hire order was made by a lawyer, there was no attempt to factor in reality in the equation ... or what some of us would term as modeling.

Yes, a lot of government decisions and actions would have brought the country out of the fourth world category, had mathematical modeling been employed. But this has to be the right one. The econometrics used by economists in some planning agencies are based on simplified assumptions of linearity and deterministic variables.

Economic planning is certainly a forecasting work. Anyone who tells you differently should probably be assigned to the theater of actors.

I can go on and on where OR techniques are useful and important to bring some sense to government planning and implementation works. Policies would be much better had scientific and mathematical modeling been employed. The processes would have been much less politicized. We would probably pace our accession to globalization calibrated to the internal competence of the civil society, and not as a ground for a convoluted braggart.

So we ask the sequential question of why is it not happening? What is ORSP doing? Well, ORSP does not have to apologize. Last year, through the honorable Elise, a most devious and dangerous criminal act was stopped completely. There was this group that conspired to control the entire shipping activities of the entire country through what is now popularly known as the E.O. 59 fiasco.
(Continued on p8)



By
Dennis
Beng Hui

THE YEAR THAT WAS

The year of 2000 was anticipated to be a year of changes. It started with the Y2K bug that was supposed to wreck havoc last year, but just died down. A couple of earthquakes and a lot of government blunders also made last year quite interesting.

For the society, it was in fact a very busy year. It started with the annual OR Quiz Contest where Ateneo de Manila University exerted its supremacy in the 11th Operations Research Quiz Contest. University of the Philippines-Diliman, and De La Salle University garnered 2nd and 3rd place respectively.

Around May of 2000, the Joint Project between ORSP and DOST on the Kapihan Series ended with three experts of OR in their respective fields. Mr. Vic Reventar of Software Ventures International discussed OR in Financial Applications in Government, Mr. Rizaldy Capulong of the Social Security System talked about OR Applications at SSS, and Mr. Edwin Pineda of the University of Asia and the Pacific on Ethics and OR in the Capital Markets.

Talking about government problems, it was last year that ORSP started to spend a lot of time helping the Philippine Government in some of its controversial issues through the ORSP-CORPS (Committee on OR for Public Service). Two projects were done pro-bono by members of the CORPS headed by Ms. Elise Del Rosario. These projects were the privatization of the Philippine Ports and an assessment on the performance of the Bureau of Customs. These projects were commissioned by the Economic Mobilization Group (EMG) and were partly funded by the PHILEXPORT Incorporated. The latest project completed by the ORSP-CORPS is a systems audit on the Entry Encoding Centers in the Bureau of Customs being operated by the Philippine Chamber of Commerce and Industry.

In addition to these extension services, the society organized a one-day seminar entitled "Enhancing Profitability through Operations Research" last December 6, 2000 at the Manila Peninsula. More than 40 participants from the industry and academe attended the seminar, which

talked about the applications of OR in Manufacturing, Telecommunications, and Finance. Also discussed during the seminar were OR tools such as linear programming, simulation, and decision analysis.

With these accomplishments, more projects are already lined up for 2001. ORSP hopes to get members involved in its future projects. Members can choose to: a) work with students as lecturers and quiz contest advisers/organizers along the lines of student outreach; b) contribute as lecturers in the seminars that ORSP will continue to offer; c) along more academic lines, be active in the newsletter and journal publications, and d) work as consultants in the various projects being undertaken by the ORSP Corps.

Everyone is encouraged to join the society's projects! ORSP wants your help!

ORSP VP Mercado Presents Philippine... (CONT from page 4)

Lumpur International Airport, and a dynamic programming based decision tool for yacht racing in New Zealand. ORSP VP JC Mercado presented an application of OR in telecommunications entitled "Network Design for a Multi-POP ISP."

The ORSJ annual conference was held at the Tokyo Institute of Technology on September 26-27, 2000. The APORS session, being an integral part of the conference, was held in the same venue on September 27 from 10 am to 6 pm. After the conference, Daiwa House sponsored a field trip for the guest APORS speakers. First stop was one of their plants in Hamamatsu different housing parts were manufactured.

A Shogun checkpoint-turned-museum and a famous meditation garden in the area was other destination. Participants stayed at the luxurious Hamanako Royal Hotel, one of several hotels owned by Daiwa House. Here, a traditional Japanese dinner was served to the participants complete with sushi and sake.

For those who are interested to join the 2001 ORSJ conference as ORSP representative, please send an extended abstract of your paper to the ORSP Secretariat c/o Tina Domingo.

OR INTERVENTIONS...

(CONT from page 6)

Had they succeeded, about 80 to 90% of the shipping volumes in all the ports of the country would be under them. Of course, several OR methodologies were used, but I will leave it to Elise to boast of what she and JC did. But really, a lot can be done.

Unfortunately, nobody has yet made operations research and management science a career in government. In fact, there is no such position in the government.

We at ORSP will not stop advocating for the change so badly needed. But it is important that we prepare the next generation, and that is you here, to look into it as a possible lifetime endeavor.