Osaka: Japan's Oldest Port and a Prospering "City of Water"

Historical Gateway for Exchange

As the oldest port city in Japan, Osaka is called the "City of Water." In the seventh century as the capital of Japan, Osaka played a major role as Japan's gateway for exchange between China and Korea. In the 17th century Osaka developed as a city of commerce using water transport efficiently and through the consolidation of its canals and waterways. The metropolis of Osaka, also called "The Nation's Kitchen" due to its abundance of culinary delights, has walked hand in hand with Osaka Port while representing Japan.

Port of Osaka would like to invite the 21st World Ports Conference of IAPH in 1999
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PORT of MIAMI
PORT OF THE AMERICAS
Non-ISO Container Report Finalized

On the initiative of Mr. John J. Terpstra (Port of Tacoma), Chairman of the IAPH Cargo Operations Committee, the Tokyo Head Office has recently published a report on the results of its 1993 survey of the penetration of non-ISO standard containers, and has circulated copies to all IAPH members.

Chairman Terpstra says in his foreword to the report, “I believe this follow-on effort to the previous year’s survey has been valuable as a tool to confirm trends that may be negative to our industry.”

He further states as follows:

“We are pleased to report the survey has again shown that the handling of non-ISO standard containers still remains a relatively new phenomenon confined to a limited number of ports.

“Driven by the quite small percentage of non-ISO containers handled when compared to the overall number of containers worldwide and the U.S./Asia experience with an apparently well coordinated use of non-standard containers, we are led to believe that we are not yet at a point of serious concern.

“Accordingly, this committee recommends no special action based on this survey, but will consider a future survey, probably in 1995, to test trends over a two-year experience.”

Additional report on UN CSD activities from Mr. Falvey

Following his recent report on the Committee on Sustainable Development (CSD) of the United Nations which appeared in the previous issue of this journal, Mr. Patrick J. Falvey, Chairman of the IAPH Legal Counselors (Special Council, Port Authority of New York & New Jersey), has sent President Lunetta the following report and circulated a copy to the Vice-Presidents and the members of the IAPH/IMO Interface Group. Mr. Falvey’s report dated October 11, 1994, follows.

This is to supplement my report of September 7, 1994 on the activities of the UN CSD in regard to Agenda 21 of the UN.

Through the initiative of Ms. Liburdi, I attended the 1994 Conference at which the UN Department of Public Information briefed the representatives of the Non-Governmental organizations which have varying liaison relationships with the UN and its agencies; it was held to inform as to the upcoming agenda for UN operations and policies to come before the General Assembly.

It included an address by the Secretary General and reports by key UN officials. Each of them expressed the objective of further involvement of NGOs in the affairs of the UN and of closer cooperation with them and between them and the UN and its agencies.

The majority of the NGOs are from the humanitarian, environmental and social welfare voluntary organizations around the world. The basic theme of the Conference was that there is great scope and need for mutual assistance between them and the UN in the formulation and execution of the new main mission of the UN in the post-Cold War period. Secretary General Ghali described this mission as “building a new framework which takes into account economic behavior and social and cultural expectations”. His Agenda for Peace is predicated on uplifting the economic behavior, the social and cultural levels of the world population, including the lesser developed countries, so that survival and a decent level of existence will not require force for the acuisition of the requisite economic assets.

Presentations which were well received included that of an American Indian activist who urged that the world should emulate the indigenous peoples and their zealous protection of nature and planetary resources. She stressed that indigenous people add nothing to the soil or to the earth’s waters except what will improve their quality. By her credo, even environmentally neutral substances could not be placed in the soil or in the waters.

A later presentation by the UN’s Director for the Human Development Report of the UN Development Program was also acclaimed by the attendees. She asserted that sustainable development is not to be limited to economically sound efforts to create jobs and economic benefit; that poverty cannot exist along with sustainable development; and that standards of living must be raised everywhere. She then suggested that this is so essential for world peace that perhaps it is time for global taxes to be imposed to provide the means for a social welfare system which will overcome poverty. A pollution tax or energy tax was mentioned as a possibility for funding such a global program. She urged that such issues be addressed and approved at the World Summit for Social Development to be held in Copenhagen in March 1995; and that the NGOs should urge their governments to support
such initiatives at the Summit meeting. She and several other UN officials also urged the NGOs to lobby their governments to have them promptly pay UN dues and assessments. The unspoken trade off seemed to certain cynics to be that in return the UN and its agencies will give greater access to NGOs and more heed to the agendas of NGOs. There were passing references to the need to involve business interests but no specifics as to the role of business groups or their means of being heard.

Again, at the risk of sounding like Cassandra, I think it important that these notions be monitored lest they become involved business interests but no specifics as to the role of business groups or their means of being heard.

Mr. Smagghe Addresses PMAWCA Meeting

At the invitation received from the Port Management Association of West and Central Africa (PMAWCA), Mr. Jean Smagghe, our Vice-President representing the Africa/Europe region, attended the 19th Council Meeting of PMAWCA, which met in Banjul, Gambia from 5 to 12 October 1994.

According to Mr. Smagghe, the Council Meeting was attended by about 200 delegates, about 40 African ports being represented through 19 national delegations.

Mr. Smagghe addressed the gathering in the presence of the Minister of Works and Communications and other members of the Gambian Government. He congratulated the President of PMAWCA, Mr. Kumedzro (Ghana) and the Secretary General Mr. N'Jie (Nigeria) for the quality of the work done by the technical committees dealing with port safety, environment, training, statistics and EDI.

Mr. Smagghe’s report indicates that some of IAPH’s friends, including Mr. Jean Michel Moulod from the Port of Abidjan (a former President of PMAWCA) were attending the meeting. Also present were 15 representatives of European ports (Marseilles, Le Havre, Bordeaux) and the European port industry from such countries as the Netherlands and Finland.

Mr. Smagghe’s address is reproduced below.

Mr. Minister; Mr. President of the Port Management Association of West and Central Africa (PMAWCA); Mr. Secretary General of the Association; Distinguished Colleagues; Ladies and Gentlemen,

On behalf of the officers and the Secretary General of the International Association of Ports and Harbors (IAPH), it is my privilege to extend my warm congratulations to all of you gathered in this beautiful port city of Banjul for the 19th Council Meeting of the Port Management Association of West and Central Africa.

Many thanks go to the Gambian Government and the Gambia Ports Authority for their kind and generous hospitality. My congratulations go to the entire membership of the Association as well as to its able officials who have succeeded in developing this institution to this impressive level of international recognition over the past two decades.

The world is changing and, during the past twelve months since your Association met at Libreville, Gabon, we have observed new waves of changes in many regions of the World. Although the GATT talks are yet to be ratified by each member government of the world community, the world trade community has started to talk about the future framework of the World Trade Organisation, which forebodes probably more changes in the years to come. The implementation of the North American Free Trade Agreement (NAFTA) as well as the creation of Asia-Pacific Economic Cooperation (APEC) will have a great influence on the world economy. And, of course, the new developments and the foreseen extensions of the European Union will have consequences on the economy of the African Continent, bearing in mind that Europe must never forget its historic and economic links with African countries.

The economic development of African countries owes much to the degree of efficiency of ports serving the sea trade. Ports must be considered as reliable participants in the trade community, locally and internationally. They must strengthen the links of communication among all the people involved, to better prepare for the oncoming changes and to gather experience and wisdom. That is why the role of your Association is so important, and why the very valuable work performed by your technical committees, as well as the official resolutions which are adopted by your Association, are of the utmost interest. Your voice should be heard not only by your colleagues of the Port Management Association of Eastern and Southern Africa, but also by the world port community via IAPH.

In February 1994 I organized, as each year, a meeting of the European and African IAPH activists in Paris. This included the chairmen and active members of our technical committees as well as the members of the IAPH Executive Committee. Africa was very well represented, particularly by our friends Jean Michel Moulod, Port of Abidjan, a member of the IAPH Executive Committee, and by four or five other colleagues, some of them attending our meeting today, like Mr. Andre Priso from Cameroon.

During this meeting, we had a long discussion about the specific problems of African countries and the necessary links between European ports and African ports, and this topic of discussion came up again during the meeting of the Executive Committee of our Association in June in Co-
penhagen. So I want to assure you that our Association fully takes into account the specific problems of African ports and I do think that it is important and fruitful for all your ports to belong to IAPH, to attend its meetings and conferences and to participate in its 12 very active technical committees. Our next conference will take place in Seattle, USA, hosted by the ports of Seattle and Tacoma, in June 1995, and I am sure that Africa will be well represented.

I would like to remind you that IAPH today is represented by about 250 Regular Members from some 87 countries, including 12 members of your Association. IAPH has been granted consultative status by the United Nations, and its agencies related to maritime transport, trade development and environmental protection, including the ECO-SOC, IMO, UNCTAD and UNEP, are taking a positive role in the fields of prime importance to seaborne transport and trade.

IAPH is, of course, a professional group of experts. The expertise and experience accumulated in each member port have been reflected in the activities of its 12 technical committees. Such efforts have culminated in various practical guidelines on varied subject areas of paramount importance for the ports at large.

The range of the work is very broad, including such areas as port planning, construction, environmental protection, dangerous goods, vessel traffic services, sea trade, EDI and the smuggling of drugs through ports. The 12 UNCTAD/IAPH monographs are further evidence of IAPH’s collaboration for the transfer of technology and technical cooperation. IAPH members have also been supporting a bursary scheme since the 1960s devoted to young but ambitious port officials from member ports of developing countries.

IAPH has constantly been keen on monitoring what is happening in the maritime community on a global scale. In this context, IAPH has been functioning as a global forum for the world port community. As you know, wide-ranging responsibilities as imposed on the maritime community and ports cannot be excluded from sharing their due burden in the years to come. IAPH has adopted resolutions on port safety and the environment, and our Association is pursuing the concept of the sustainable development of the world’s ports. This concept, in my opinion, must consider the economic situation of each country and the fact that ports in a region like West and Central Africa are absolutely vital for its economic development.

Finally, I am here to offer you the experience of world ports and particularly the help of the ports of the North — not only to share our experience with you, but also to help avoid some of the mistakes we have made before.

Moreover, I shall personally do my best to further this cooperation, and to take the African ports interests into consideration in the IAPH discussions and resolutions, particularly in my position as Chairman of the IAPH/IMO Interface Group.

Mr. President of the Port Management Association of West and Central Africa, I have been impressed by the quality of the work of your technical committees. I want to wish you great success in your Council work during the coming three days.

Mr. Minister, thank you again for the generous hospitality of Gambia, the efficiency of the Conference organizers, and the kindness of all the staff of the Gambia Port Authority.

Thank you for your attention.

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**Minutes of the Meeting of the Combined Transport & Distribution Committee**

**Hyatt Regency Hotel, Osaka, Japan**

**09:30 - 16:00, Friday, October 21, 1994**

**Members Present:**

Mr. G. Wennergren (Chairman), President, Port of Gothenburg AB, Sweden  
Mr. S. Samuelson (Secretary), Marketing Director, Port of Gothenburg AB, Sweden  
Mr. J. Hirst, Executive Director, The Association of Australian Port and Marine Authorities Inc., Australia  
Mr. T. Yanagihara, President, Osaka Port Terminal Development Corporation, Japan

**In Attendance:**

Mr. A. Semma, Director, Comprehensive Planning Division, Port of Osaka  
Mr. R. Kondoh, Deputy Secretary General, IAPH Secretariat

**Observers:**

Mr. T. Ito, Manager, Port Promotion Department, Port of Osaka  
Mr. Y. Okuda, Manager, Port Planning Department, Port of Osaka  
Mr. N. Uemura, Port Promotion Department, Port of Osaka  
Mr. H. Nagai, Assistant Under Secretary, IAPH Secretariat

**1. Introduction**

Chairman Wennergren opened the meeting by welcoming the members present and thanked Mr. Yanagihara and the Port of Osaka for hosting the meeting for the Asia/Pacific members, and commented on the agenda of the meeting, as follows:-

1) The Plan  
2) The Report Now  
3) What’s Missing  
4) Structure of Final Report  
5) Missions to the Delegates  
6) Next Meeting

He said that, prior to the Osaka meeting, the committee members in Europe and Africa had met in Askörlön, Sweden, on September 8, 1994, and the report on the meeting was now available for review and discussion by the members.

The Chairman brought the attention of the members to the definition of “combined transport” as “a transport between two points, using more than one transport mode, but involving at least one sea-leg, under one management and a single transport document” and to the objectives and work program of the committee set out in its report to the Copenhagen Exco meeting in June 1994.

He briefly took time to confirm the present committee membership status which, in his words, was in good order, and welcomed Mr. Hu Geng, Director of Freight Transportation, Quinhuangdao Port Authority, China as a new
committee member, though he was not present at the meeting.

He then informed the committee that the results of the discussion at this meeting would be incorporated into the final report to be prepared in the coming months for presentation to the Seattle/Tacoma Conference in June 1995.

The Chairman thus emphasized that it was very important that the members make a substantive contribution to the discussion by sharing their opinions, thoughts and practical experience freely and frankly.

He also said that the committee would meet again in February 1995 in Cape Town, South Africa, to be hosted by Capt. Jan Mors, Portnet, and that every member would be welcome to attend.

2. Discussion on the Report on the Askeron meeting

The Chairman explained to the members about the Report on the Askeron meeting, outlining the current trends of and major obstacles to combined transport and the future scenarios for promoting efficient combined transport.

He said that the final committee report to be completed would be based on the Askeron report and it would be of interest and concern to IAPH member ports, as most of them are seeking more efficient ways and means of combining transport modes to meet the needs of customers transporting various kinds of cargo.

He then invited the members to make any comments on the report.

1) Trend towards larger ships

In response to the Chairman's remarks, Mr. Hirst said that the keyword is reliability in intermodalism, and that the trend towards larger ships nowadays affects the combined transport forms and determines new port solutions.

2) Port reform process

He also said that, as ports in Australia are now in the reform process, changing from government entities to more customer-oriented private entities, they are still seeking to clarify their new roles, as a consequence of which ports are outsourcing their services.

3) Environmental pressure

The Chairman touched upon the importance of environmental issues by saying that for ports to be environmentally conscious and aware today would mean a competitive edge in the future, to which Mr. Hirst agreed and added that the Association of Australian Port and Marine Authorities (AAPMA) is now preparing “Environmental Guidelines” for its members. Mr. Kondoh also added that IAPH had highlighted environmental issues from the perspective of port managers by producing some practical guidelines for ports in the recent years.

Mr. Yanagihara said in the similar context that the Port of Osaka had currently no major environmental problem, as the port cooperates fully with the city government and the national government in environmental protection. He further said that Osaka, like other major Japanese ports, must formulate its port development plan from the wider perspective of urban development, as the port has a vast hinterland and must have a coherent development plan compatible with the municipal, industrial, commercial and residential interests.

4) Types of port administration and management

The Chairman took the opportunity to highlight the differences in port administration and management among ports in the world, especially the Port of Gothenburg as an operating port and the Port of Osaka as a tool port whose role he has become aware of since his arrival in Osaka. He commented that it was important to bear in mind such a difference in discussing port-related issues and problems.

He also mentioned that in Sweden there exists no overall government port policy. This is different from Japan, where the Ministry of Transport has strong involvement in and influence on ports, and some European countries such as Germany, France and Belgium, where a similar situation prevails.

Mr. Semba mentioned that Japanese ports construct and provide public infrastructure such as terminals, port access roads, greenery, etc. with government subsidies. He also commented that the Port of Osaka as a municipal department strives to develop and sustain the local economy, in close cooperation with the municipality in the total urban development.

5) Port charges

The Chairman said that port charges should be clear, coherent and comprehensive to shippers, indicating the necessity to avoid double charges, to which Mr. Hirst agreed. He also mentioned that, unless port charges got through to the shippers in a clear and proper manner, ports could be blamed for everything bad.

6) Modal shift

Mr. Hirst said that road transport in Australia was now seen as an environmental minus due to the air pollution it creates, and it was therefore being replaced by coastal transport providing more speedy container service. Mr. Kondoh commented that an identical phenomenon was happening in Japanese ports, i.e., “modal shifts” where transport is shifting from road to rail to water out of environmental considerations.

7) Case studies

The Chairman informed the members that a case study of car manufacturers’ logistic cooperation would be included in the final report, e.g., the sharing of the same terminal in Gothenburg by Volvo and Mitsubishi. He also said that the fact that car manufacturers nowadays recycle car parts might provide new business opportunities for ports. Mr.
Samuelson added that it was of interest to know that Volvo appears to be in the process of transforming itself from a pure car maker to a logistics company outsourcing their car production, as part of the rationalization of the production process.

8) Government regulation on ports

Mr. Hirst said that excessive government regulation on Australian ports used to exist, which was a minus for ports functioning as service providers and trade facilitators. Then he presented the Chairman with a copy of his recent paper entitled “Issues in the Commercialisation of Australia’s Ports”, in which he discussed the subject in full detail.

9) Other topics

Mr. Yanagihara inquired whether the recent fluctuating foreign exchange rates affected port operations in Sweden, as they have done in Japan in terms of the rate between the US dollar and Japanese yen. The Chairman responded by saying that his port has faced a similar problem, and that unless there was a world currency, they would simply have to face it.

Mr. Hirst inquired how the Port of Osaka met the various complex needs of its customers. Mr. Semba said in response that the port was fully prepared and equipped to meet such various needs in a satisfactory manner, as it offers various options of transport such as domestic ferries, truck terminals and air cargo terminals.

Mr. Yanagihara commented that there seemed to exist a need for the committee to generate awareness of intermodalism among developing ports by transferring the relevant know-how and techniques, considering the fact that cargo traffic between Osaka and the South East Asian countries is on the rise. The Chairman agreed with Mr. Yanagihara and said that he would include this point in the final report.

The Chairman commented that it would be important to enhance people’s awareness of whatever issue is involved as a first step. He then adjourned the meeting for lunch.

LUNCH BREAK (12:30 - 14:00)

3. Final Report for the Seattle/Tacoma Conference

After a luncheon hosted by the Port of Osaka, Chairman Wennnergren resumed the meeting and explained the structure of and outlook for the final report to be prepared by the next IAPH Conference in Seattle/Tacoma in June 1995.

After the Chairman’s presentation, Mr. Hirst and Mr. Yanagihara thanked the Chairman for his initiative and agreed to proceed with the matter accordingly.

1) Inter-continental port network

The Chairman informed the committee that he is also seeking professional advice and assistance from the Technical University of Gothenburg as to how ports can cooperate with one another and with shipping lines in a more efficient and harmonious way under the theme of “Inter-continental Port Network”.

As a supplementary explanation, Mr. Samuelson gave some specific ideas of the project study being undertaken by the University, i.e. 1) organizing ports into a consortium type of network, 2) the degree of cooperation between ports and shipping lines in such a network, 3) the standardization of trade procedure and documentation, etc.

2) Port Cooperation

In this context, the Chairman provided an example of such cooperation between ports, namely a daily liner service recently established between Gothenburg, Sweden and Zeebrugge, Belgium, operated by a development company jointly formed by the two ports to provide a faster transport link and to meet the sophisticated needs of their customers. He also said that going by sea on the Gothenburg-Zeebrugge route was a demand of the day to avoid heavy traffic jams caused by road transport in Northern Germany.

3) Cooperation between ports and shipping lines

Mr. Hirst responded to the Chairman’s remarks by saying that it seemed possible to form a sort of alliance of ports for cooperation, but it should not imply that ports would dictate to shipping lines or to anyone else. Mr. Yanagihara agreed with Mr. Hirst by saying that ports and shipping lines should go hand in hand and should not hinder each other’s development.

Mr. Kondo also commented that he saw a trend in which ports in a European country are now engaged in a survival game — one port buying another to survive through intermodalism.

He also referred to the IMO Ship/Port Interface Group recently established to address and deal more effectively with issues of concern to the port and shipping communities, to which IAPH is heavily committed.

Mr. Hirst commented along similar lines that, since IMO seemed slow to come up with ideas and to act on port-related issue, IAPH should indeed take the initiative. He further commented that, since a port is a business, it should act like a company.

4. Conclusion

There being no further matters raised for discussion, the Chairman thanked the members for their active participation in the discussion and Mr. Yanagihara and the representatives of the Port of Osaka for their kind cooperation and assistance in making all the arrangements for the meeting. He closed the meeting at 16:00.

Report by H. Nagai, IAPH Head Office
Authorized by Chairman Wennnergren, Port of Gothenburg

Visitors to Head Office

On Tuesday 11 October, Mr. and Mrs. Göran Wennnergren, Port of Gothenburg, Sweden and Honorary Consul of Japan in Western Sweden, visited the head office and met with Secretary General Kusaka and his staff. In his trade development mission to Japan, Mr. Wennnergren accompanied by Mr. S. Samuelson, Marketing Director, Port of Gothenburg, then proceeded to Osaka to chair the meeting of the Combined Transport and Distribution Committee, held at the Hyatt Regency Hotel, Osaka, hosted by the Port of Osaka for the two days of 20 and 21 October.

On Wednesday 12 October, Mr. Mic Dinsmore, Port of Seattle, Mr. John Terpstra, Port of Tacoma, and Mr. A.J. Smith, IAPH Liaison Officer in London, visited the head office, where they met with Mr. Hiroshi Kusaka and his staff. They were visiting Tokyo to attend and give lectures at a local gathering held on Thursday 13 October in Tokyo to promote the 19th IAPH World Ports Conference next year in Seattle. The event, entitled the 7th IAPH Japan Seminar was attended by some 180 people comprising officials of government agencies, resident IAPH member.
ports and maritime interests. It was hosted and held under the auspices of the IAPH Foundation (Mr. Shizuo Asada, President). Mr. Dinsmore and Mr. Terpstra presented the topics and programs of the forthcoming Conference next year and outlined the current situation concerning their respective ports. Mr. Smith’s presentation was about the current circumstances of the European ports. Also present at the meeting were: Mr. T.A. Wollebek, Senior Director, Marketing and Trade, Port of Tacoma, Mr. Robert B. Koplowitz, Director, Marketing & Business Development, and Mr. Steve Sewell, Director of Marine Division, Port of Seattle.

On Wednesday 19 October, Mr. George M. Miller, Vice President, Port of Portland Commission, and Mr. Bob Hrdlicka, Marine Director, Port of Portland, visited the head office to meet with Secretary General Kusaka and his staff. The Port of Portland delegates were visiting Japan on a trade development mission to the Asian region.

On Wednesday 19 October, Mr. John Hirst, Executive Director, the Australian Association of Ports and Marine Authorities, Sydney, visited the head office for a meeting with Mr. Hiroshi Kusaka and his staff. Mr. Hirst was visiting Japan to attend the meeting of the Combined Transport and Distribution Committee (Mr. G. Wennergren in the chair) which was held in Osaka on 20 and 21 October.

On Tuesday 25 October, Mr. Rudy Zaurbier, Vice President & Managing Director of Floatex, Brescia, Italy, accompanied by Mr. Kazuhiro Kikuchi, an IAPH Life Supporting Member, visited the head office, where they met with Mr. R. Kondoh. Floatex, formerly known as Resinex and associated with IAPH, is an Italian manufacturer of buoys and fender systems.

On Friday 28 October, Mr. John King, Chief Executive, Port of Melbourne Authority, visited the head office and met Secretary General Kusaka and Mr. R. Kondoh. Mr. King was attending a ceremony marking the 20th anniversary of the sister ports relationship with the Port of Osaka, together with the Hon. Bill Maxter, Ministry for Roads and Ports, Victoria, and Mr. Kevin Shea, Adviser to the Minister.

On Friday 28 October, Mr. Robert Cooper, Chief Executive, Ports of Auckland Ltd., and the 1st Vice President of IAPH, visited the head office to meet with Mr. H. Kusaka and his staff. Mr. Cooper, taking part in a trade development mission to the region, was travelling with Sir Richard Carter, Chairman, and Mr. Geoff Vazey, General Manager Operations.

On Tuesday 1 November, Ms. Lillian Liburdi, Director of Port Department, the Port Authority of New York and New Jersey, accompanied by Mr. Takahito Miyazawa, General Manager, Transportation of the Tokyo Office of the Authority, visited the head office to meet with Mr. Hiroshi Kusaka and his staff.
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Mauritius Marine Authority, Mauritius                                        200
Melbourne Authority, Port of, Australia                                      1,000
Miri Port Authority, Malaysia                                                100
Montreal, Port of, Canada                                                    500
Nagoya Container Berth Co., Ltd., Japan                                      518
Nagoya Port Authority, Japan                                                 3,564
Nanaimo Harbour Commission, Canada                                           250
Napier, Port of, Limited, New Zealand                                        100
New York & New Jersey, Port Authority of, U.S.A.                            1,000
Niigata, Port of, (Niigata Prefecture), Japan                               860
Okubo, Mr. Kiichi, Japan                                                     274
Osaka Port Terminal Development Corp., Japan                                 570
Pacific Consultants International, Japan                                     243
Penta Ocean Construction Co., Ltd., Japan                                    500
Point Lisas Industrial Port Development Co. Ltd., Trinidad                   100
Primer Concurso Internacional de Memorias Portuarias: Carlos Armero Sisto,  |
Anuario de Puertos: Buenos Aires, Argentina                                 300
Public Port Corporation I, Indonesia                                         180
Pusan East Container Terminal Co.Ltd., Korea                                 200
Quebec, Port of, Canada                                                      250
Shipping Guides Limited, U.K.                                                500
Solomon Islands Ports Authority, Solomon Islands                             100
South Carolina State Ports Authority, U.S.A.                                1,000
Tauranga, Port of, New Zealand                                              500
Toyama Prefecture, Japan                                                     254
UPACCIM (French Ports Association), France                                   1,905
Vancouver, Port of, Canada                                                   500
Total: US$50,299                                                             

*1st International Contest of Port Annual Reports sponsored by the Yearbook of the Port of Buenos Aires (Editor, Mr. Carlos Armero Sisto)

**Membership Notes:**

**Changes**

National Port Authority [Regular] (Panama)
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Director General

Turkish State Railways (TCDD) [Regular] (Turkey)
Director of Ports Department:
Mr. Ali Uyar

BMT Port & Coastal Limited [Class A-3-1] (U.K.)
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Telex: 263118
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Fax: 0703 232891
IAPH Japan Seminar Attrac.ts 180

On the afternoon of October 13, 1994, the "7th IAPH Japan Seminar" was held in a Tokyo conference hall, sponsored by the IAPH Foundation* in cooperation with the IAPH Head Office. The IAPH Foundation has organized a series of seminars for the promotion of IAPH conferences among IAPH members and other people in port businesses in Japan. Since 1988, the seminars have been organized to promote the forthcoming biennial conference of IAPH among the potential participants in Japan, which has traditionally sent a big delegation to each conference.

Naturally this year's seminar focused on the 19th Conference to be held in Seattle next June, hosted by the Ports of Seattle and Tacoma. At the invitation of the IAPH Foundation, Mr. M.R. Dinsmore, Executive Director, Port of Seattle, and Mr. J.J. Terpstra, Executive Director, Port of Tacoma, who are co-chairmen of the 19th Conference, flew to Tokyo and made presentations to the audiences on the details of the arrangements our hosts are making for the Conference, while highlighting the latest situation of their respective ports using video presentations so as to convince the Japanese participants why they must be in Seattle next June.

The other speaker invited to the seminar was Mr. Alex J. Smith, IAPH European Representative, who spoke on the subject "IAPH and Maritime Transport-related developments from a European Perspective", which we feature in this issue together with the presentations made by our hosts from Seattle and Tacoma.

The seminar and reception which followed attracted some 180 participants - IAPH resident members, officials from Japan's Ministry of Transport and other people in port businesses. The event was also attended by 20 students from the Yokohama Harbour College, headed by Professor Tomita of the college.

Mr. Shizuo Asada, President of the IAPH Foundation, opened the seminar and reception. In his opening address Mr. Asada commented as follows:

"In order to establish a new international framework for the post-Cold War era to help solve various issues and conflicts, strenuous efforts have been made by the United Nations in coordination with all the countries of the world. However, many countries are still tackling with a number of serious problems as the depressed world economy struggles to take off. I believe that the emergence of the EU in Europe, the start of the NAFTA arrangement in the north American and rapid economic growth in China and other emerging economies in Asia will have a great impact on the world economy. At such a critical time I feel extremely grateful and privileged that we are able to have with us today three most eminent guest speakers to address us on the key issues of interest to us."

Also present was Mr. Toru Akiyama, Mr. Asada's predecessor at the Foundation and Secretary General Emeritus of IAPH, whose address that evening is also reproduced below. Mr. Hideaki Kayahara, Director-General, Bureau of Ports and Harbors, Ministry of Transport, who is an IAPH Exco member from Japan, addressed the gathering.

*Note: The IAPH Foundation

The Foundation was established as a Japanese corporation in 1973 to help IAPH financially when the Association was undergoing a financial crisis triggered by what became known as the "Nixon Shock" of the early 70s. Since IAPH succeeded in achieving financial independence effective from 1982, the Foundation, under the new Agreement, has been continuing its support and assistance to IAPH through its various undertakings. These include the publication of the Japanese, French and Spanish versions of "IAPH News and Announcements" for the members in these regions, financial assistance for the IAPH Award Scheme and the dissemination of literature and material on ports from Japan to foreign countries and vice versa.
Address by Mr. Akiyama

Good evening ladies and gentlemen, I am Toru Akiyama.

As an individual who has been involved and associated directly and indirectly with the International Association of Ports and Harbors since its inception in the early fifties and its foundation in 1955, it is a special privilege and pleasure for me to attend this gathering to meet with my long-standing friends and to make new friends.

The presentation today by Mr. Dinsmore and Mr. Terpstra of the Ports of Seattle and Tacoma gave me the impression that the forthcoming 19th Conference in Seattle next year will be filled with interesting topics and exciting programs. For an individual who has attended all the IAPH Conferences, except the one in London in 1965, the presentation was so compelling that it made me think about the possibility of attending the Seattle Conference and of renewing my CONTINUOUS ATTENDANCE RECORD. However, this is still problematic for an individual who is about to graduate from the status of octogenarian and pass yet another landmark.

I cannot but feel a deep sense of appreciation for the development of IAPH activities and achievements of the Association today. We have come a long way since the time when I was serving on the Organizing Committee for the Tokyo Conference in 1967 and was then nominated to look after the secretariat because of my association as a back-up for the late Mr. Gaku Matsumoto.

I was also very pleased by the presentation by Mr. A.J. Smith, an old friend of mine, which illustrated the dynamic and expanding nature of IAPH activities in the international maritime theater. In this context, I would like to express my sincere appreciation to Dr. Hajime Sato and Mr. Hiroshi Kusaka, who have succeeded me as IAPH Secretaries General, and to the staffers of the head office. However, I fully recognize that none of this would have been possible without the constant help and cooperation extended by all IAPH members — and that certainly includes you gentlemen who are gathered here tonight.

As we learned from the presentations today, we all know that we are witnessing changes on a global scale. The environment surrounding ports is also changing correspondingly. No matter what changes occur, however, I firmly believe that the roles to be played by ports will remain vitally important. For that reason and for the future of ports, I would like to emphasize that everything hinges on your continued efforts for the future of ports.

In this context, I am confident that IAPH activities are of relevance and benefit to you. Therefore, I would like to strongly encourage you to attend the Sea/Tac Conference next year, and further invite you to take part enthusiastically in the IAPH committee activities.

Thank you very much for your attention.
Presentation on 19th IAPH Conference

By Mic Dinsmore
Executive Director
Port of Seattle
Co-chairman
19th World Ports Conference of IAPH

I welcome the opportunity to invite you to the 19th World Ports Conference of the International Association of Ports and Harbors (IAPH). IAPH '95 will be co-hosted by the Ports of Seattle and Tacoma from June 10 to 16. Since Seattle and Tacoma are located so close together geographically, we welcomed the occasion to cooperate and to host this important meeting.

Our theme for the Conference “New Challenges — New Partnerships” is very timely. Changes in the global marketplace demand that during these times of incredible change that we look for new ways of doing business and new solutions to the challenges we face.

The goal of our program will be to balance the business and social aspects of this international gathering of friends and associates allowing time to exchange ideas and opinions, and still have social time in a comfortable setting which truly reflects the Northwest style of hospitality.

Why should you attend IAPH’95? Consider these four reasons. First, IAPH will bring 700 delegates and their guests to the beautiful Pacific Northwest. Seattle is known around the globe as one of the best places to conduct international business. Its scenic beauty and reputation as one of the most livable cities in the United States make it a popular tourism destination.

Second, the IAPH program promises to be informative and thought provoking. IAPH will look at a wide range of issues facing ports today, including new developments in intermodality, new technologies, the impacts of GATT and NAFTA, and the new alliances that are developing between shipping lines, railroads and the private and public sector.

Third, you will enjoy and learn from interacting with your peers from around the world. Come see for yourself why Seattle was chosen to host last fall’s APEC leaders meeting.

More than ever before we need to examine our industry closely, and we invite you to join us in Seattle to be part of this important discussion.

And finally, consider our long-standing relationship with Japan and our commitment to further nurture it. Japanese companies, like Nintendo and Mitsubishi, have located in Seattle in part because our history together has fostered a welcoming attitude toward the Japanese people and culture. This friendship has made Seattle a natural extension for the Japanese trade community.

As we head to the 21st century, in what clearly is a global economy, no two countries will play more critical roles than Japan and the U.S. And we in this region are committed to enhancing these already well-established people to people relations.

Registration fees received by April 10, 1995 will be $1,000 for IAPH members and $1,500 for non-members. After April 10th, fees increase to $1,200 and $1,650 respectively.

At this time, I would like to introduce my colleague, Mr. John Terpstra, the Executive Director of the Port of Tacoma. Mr. Terpstra will share with you the highlights of the business and social programs.
Business and Social Program Highlights

By John J. Terpstra
Executive Director
Port of Tacoma
Co-chairman
19th World Ports Conference of IAPH

Thank you, Mic.

With the theme of “New Challenges — New Partnerships” our program committee is working hard to develop the best list of topics and speakers for our conference next June.

Let me just give you a few highlights of two of the planned working sessions:

The Challenges of Global Change
(Working Session No.2, 0900-1200, Tuesday, June 13)

This session will highlight some of the global policy issues that are impacting trading patterns. Topics here will include the North American Free Trade Agreement (NAFTA), the General Agreement on Tariffs and Trade (GATT), and update on issues that Asia Pacific Economic Cooperation (APEC) countries are facing. We will also include speakers to address African ports’ development perspectives on the 21st Century, and an update on the European Union.

Emerging Markets
(Working Session No.5, 1400-1700, Thursday, June 15)

This working session will look at the trade development potential of developing markets, ranging from Vietnam to Russia. It will also look at some of the port development and transportation challenges that these emerging areas face.

We will have a working session (Session No.2 scheduled for the morning of Tuesday, June 13) devoted to port developments on the U.S. West Coast, and three working sessions devoted to the IAPH overall committee areas of:

- Port Affairs (Session No.6 scheduled for the morning of Friday, June 16)
- Trade Affairs (Session No.4 scheduled for the morning of Thursday, June 15); and
- Human Resources and External Affairs (Session No.1 scheduled for the afternoon of Monday, June 12).

We are also putting together a wide-ranging list of technical tours and social events to make sure that all delegates and their accompanying guests get a true flavor of the rich history, cultural diversity and natural beauty of the Pacific Northwest.

Our technical tour will include a close-up look at our two host ports. Delegates and their spouses will board two tour boats on the Seattle waterfront, and get a waterside technical tour of the Port of Seattle and the Port of Tacoma. That evening, a world-famous “Chowdown” dinner in a Port of Tacoma warehouse will feature the finest in Pacific Northwest seafood as well as country of Western music and dancing.

Two other highlights of the evening social program will be:

- A visit to Tillicum Village for an authentic Native American dinner of alder-smoked salmon and steamed clams - a night of Indian folklore and authentic dances.
- The final evening will be a gala dinner/dance at the Boeing Museum of Flight. The Museum features an impressive collection of the world’s aviation past, present and future.

Throughout the week, we will also be offering a wide range of daytime tours for spouses and accompanying guests. These are scheduled to include trips to:

- Mt. Rainer (also known as “Mt. Fuji-Tacoma”);
- local wineries;
- museums and art galleries
- the Boeing Everett Plant, home of the B-777; and, of course,
- major shopping centres and unique stores in the Seattle-Tacoma area.

Pre- and Post-Conference Tours

After the Conference, we hope you'll be able to stay a few extra days in the Seattle-Tacoma area. Other tour options would include:

- Canada, for a visit to Victoria or Vancouver, British Columbia
- San Juan Islands for Orca whale watching, or
- a cruise to Alaska

I also want to mention that the Pacific Northwest has a tremendous number of challenging golf courses, so you might want to bring your golf clubs.

And finally, for the musically inclined, there are numerous ‘karaoke’ bars in the area, and we certainly hope that Mr. Kondoh will find time to share his singing talents with us sometime during the Conference.

Now, to give you a flavor of the Seattle-Tacoma area and the beauty of the Pacific Northwest, I would like you to watch a short video.

(A six-minute video was shown)

The video promises you a “Picture Perfect” convention next June in Seattle-Tacoma for the 19th IAPH World Ports Conference. So bring your camera and lots of film, and we’ll look forward to seeing you next June.

Thank you!
Seattle is thriving
Speech at the 7th Japan Seminar
October 13, 1994 in Tokyo

By M.R. Dinsmore
Executive Director
Port of Seattle
Co-chairman
19th World Ports Conference of IAPH

I am honored to be in Tokyo with you today, and I am pleased to have this time to share with you how the Port of Seattle is changing to better respond to the dynamic, ever-changing global economy. Before I make my brief remarks, I would like to show you a video that describes the diversity of services and facilities that Seattle offers.

(A 7-minute video was then shown)

As you can see, Seattle is thriving. We are very proud of the Port of Seattle and Seattle's growing presence as an international trading center. Our business is growing and we are busy making plans to welcome dramatic increases in both our marine and aviation lines of business. Our good fortune is based upon a strong foundation of mutual interests with our trading partners, in particular Japan, which now ranks as the Port of Seattle's No.1 trading partner with $13.4 billion of waterborne trade. So far air services to Seattle is now Japan's fourth largest U.S. origin-and-destination market, even without non-stop services to west-central Japan. Seattle is proud to serve as Japan's gateway to U.S. markets, and we are eager to help you create new opportunities for business.

Seattle has a long tradition of economic, cultural and educational relationships with Japan and we have grown to view each other not just as business partners but as friends. Washington state and Hyogo prefecture just celebrated 30 years as sister states. Seattle and Kobe have been sister-cities for 36 years. And Seattle and Kobe have been sister-ports since 1967. We value these relationships and want to continue to strengthen the economic ties they have fostered.

When thinking about our plans for the future, I would use two words to describe our long-term plans — "flexible" and "comprehensive". We decided that for our region to continue to succeed in a dynamic, global marketplace we needed a strategy that was integrated. It needed to be a strategy that adapted to our customers' needs, and we needed community support to make the necessary investments. It needed to look at facility expansion and development in a holistic way. And it also needed to look closely at what it would take to build and maintain world-class facilities for us that includes a container port and an airport.

What this really means is doing business differently than ever before. It means being more responsive to customer needs. It means having the most productive and motivated employees possible. It means being understood by the community we serve. And to our shareholders, we owe the soundest management of this organization. It means recognizing more than ever before that we can't do any of this alone. It's the end to "business as usual".

Our success as a catalyst for regional economic development depends on the partnerships we develop and nurture. Partnerships with our customers and shareholders as well as with the region's political, labor and community leaders. To succeed requires nothing less than working together.

Today, the Port of Seattle is moving ahead with major expansion projects in all of our major lines of business and we are also expanding our role in less traditional areas of economic development.

Marine activities:
Seattle is currently the fifth largest U.S. container port.
Waterborne trade is growing at a record pace - already 19% ahead of last year. That means more than $32 billion worth of goods will cross our docks.

**Southwest Harbor Project underway** Seattle is moving forward with a $250 million project to expand the American President Lines (APL) 83-acre Terminal 5 to nearly 190 acres. This expansion gives APL a world-class container terminal that maximizes time and profit through increased efficiency. Developing the expanded facility also means cleaning up some of the region's most contaminated lands, and returning these lands to productive, industrial use.

Our proposal had broad community support. It responded to APL's needs for on-dock rail and additional terminal capacity, and it created an opportunity to become a world leader in the area of environmental cleanup.

**New Chill Facility opens** Designed with the needs of fruit importers and exporters in mind, the Port recently expanded its chill facilities by 88,000 square feet to 202,000 square feet, making it the largest on dock warehousing operation on the West Coast. Our newest warehouse is state-of-the-art. That means it's efficient from the vessel to the truck and back again. And, it is designed for quality, with great climate control systems in each compartment - even in the truck bays. Seattle has long been committed to supporting the economic growth of Washington's agricultural community. Apple exports alone were Seattle's third most valuable export in 1993, and volumes are expected to grow 4 to 5% annually over the next five to 10 years.

**Bell Street Pier construction underway** This $83.6 million mixed use development emphasizes maritime uses, and will feature an international conference center with simultaneous translation in multiple languages, public plaza, restaurants, a contemporary maritime museum, a fish processing facility, a cruise ship and factory trawler moorage, a short-stay recreational marina, and retail space. The 11-acre pierside development, located just minutes from Seattle's downtown, will support the region's trade and tourism efforts, create a new urban center and link the waterfront neighborhood with the downtown business core. As a complement to Bell Street Pier, planning is already underway across the street for a combined World Trade Center office building, hotel and residential complex.

**Aviation activities**

At Sea-Tac Airport the news is just as remarkable. Passenger growth is booming - 13% ahead of last year, and air cargo is up 9%. We think these increases signal the healthy upturn we've all been waiting for. Recent forecasts project Sea-Tac passenger increases of at least 26%, from 18.8 million in 1993 to 23.8 million or more by the year 2000. Operations are also projected to increase more than 30% in the next quarter century. With the Puget Sound population growing at twice the national rate, we know we must expand air capacity at Sea-Tac and in the region to handle the large volumes that are headed our way. Our strategy includes making the most of the existing facility while moving forward with the environmental and political processes necessary to construct additional air capacity.

**Planning studies under way for new runway** The complex environmental studies necessary to build a new dependent runway at Sea-Tac are well underway. Along with state-of-the-art equipment, this third runway is expected to increase air traffic capacity by about 25 percent. At the same time, the Port is actively supporting a regional search for a site for a new supplemental airport.

**Several major facility expansions already completed to handle passenger growth** Projects included renovation of Sea-Tac's main terminal, expanded concourses, additional gates, new concessions, and doubling of the existing parking structure.

**Low visibility system helps maintain airfield safety** Sea-Tac became the first U.S. airport with a new generation of advanced radar equipment helping locate and keep track of airplanes and vehicles on the ground during low visibility conditions.

**Closing**

It's clear that today's ever-changing world market poses tremendous challenges and also creates unprecedented opportunities. We want to make the most of these opportunities, and take full advantage of the fact that Seattle offers a diversity of services — marine, aviation, fisheries and warehousing. It's that diversity that sets us apart, and gives us a competitive edge.

In order to retain our competitive edge we must change how we do business. It means being more responsive to our customers' needs - doing things more efficiently and at less cost than we have before. It means continuing to provide state-of-the-art facilities that allow customers to do the same. And it means recognizing more than ever before that we can't do any of this alone.

Our success will depend on the partnerships we develop and nurture. Reaching out to local communities. Working more closely with governments and labor unions. Responding to the needs of our customers. For us, a collaborative partnership strategy has been the key to success. In the end, partnerships and new alliances will define our future.

We are still learning, but we have made good progress. And in the spirit of partnership, we want to share our experience with you, during IAPH '95.

Thank you.

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Present and Future of the Port of Tacoma

Speech at the 7th IAPH Japan Seminar
October 13, 1994 in Tokyo

By John J. Terpstra
Executive Director
Port of Tacoma
Co-chairman
19th World Ports Conference of IAPH

On behalf of the Port of Tacoma, I want to express my thanks to Mr. Hiroshi Kusaka, Executive Director of the IAPH Foundation, and Mr. Shizuo Asada, President of the IAPH Foundation, for inviting me to speak at this 7th IAPH Japan Seminar in support of the 19th IAPH World Ports Conference. This seminar has been an excellent opportunity for me to renew many friendships with members of IAPH, as well as to make new acquaintances with the many port, government, and agency officials involved in the maritime and port affairs in Japan.

I also want to express my appreciation for last night’s dinner by Mr. Asada, and the opportunity to meet with the Director General, Ports and Harbors Bureau, the Ministry of Transport, this morning.

As you can imagine, Mic and I, along with many staff members of our two ports, are putting in a great deal of work in preparing for the 19th IAPH World Ports Conference which will be held in Seattle-Tacoma next June. Mic and I will be talking about that in greater detail later in the program.

I would like to start with an overview of the Port of Tacoma, to give you a better understanding of our current operations as well as our plans for the future.

Just as Mic mentioned how strong the trade ties are between Seattle and Japan, the same is true for Tacoma and the State of Washington as well. As you probably know, Japan is Washington State’s largest international trading partner. The trade and business relationships that exist between our ports are very important to the future success of ports in Japan and Washington State, and seminars such as this one provide an excellent opportunity to continue to build on these relationships.

Our Port has also developed a sister port relationship with the Port of Kitakyushu, and that has helped us develop friendships and cultural exchanges as well as new trade and business opportunities.

While all of our ports have unique advantages, market niches, and development plans, we all share one thing in common: we are all working to continually develop our port facilities in ways that better facilitate international trade.

I applaud IAPH for being such a successful worldwide forum for these discussions for nearly 40 years on a wide range of important topics pertaining to ports and trade.

In talking about the Port of Tacoma, I hope to give you a better understanding of how we are working to fully develop our facilities and future potential. In seeing how our port is working to reach its goals, I hope you will get some ideas on how your own ports can also work to develop to your fullest potential.

Like Seattle, the Port of Tacoma is one of the leading ports on the West Coast of the United States. While I must admit that Tacoma is not quite as well-known internationally as cities such as San Francisco and Los Angeles we are becoming very well-known internationally in the shipping world. Our port is currently the sixth largest container port in North America and among the top 25 container ports in the world.

Just as shipping and international trade is the lifeblood of our Port, it is also the lifeblood of the State of Washington. In our State, which has a population of just over 4 million people, one out of every five jobs is related to international trade. One quarter of the value of Washington State’s production is sold in international markets.

The leading imports through Washington’s ports are motor vehicles, motor vehicle parts, aircraft engines, toys and sporting goods, and data processing equipment. Our leading exports are airplanes, forest products, wheat, aluminum, and aircraft parts. You are probably familiar with many of Washington State’s products, such as Almond Roca, a famous candy that is produced in Tacoma. Many of our leading export items are exported through the Port of Tacoma.

Each year, our Port handles over 13 million short tons of cargo, of which about 10 million tons are exported. Of our $23 billion of international trade, over $11 billion of that is done with Japan.

Tacoma’s role in expanding its efforts in the area of exports recently earned our port the highest honor possible in the United States. We were presented the President’s “E Star” Award for excellence in exporting. This is the first time in five years that a U.S. port has received this award, and we are only the sixth port in the United States to ever receive this prestigious honor.

History

In order to understand where the Port of Tacoma is today, it is helpful to understand where it’s been. Last year, the Port celebrated its 75th anniversary. We were first created by the citizens of Pierce County by a vote in 1918. The Port started out on 240 acres of barren tideflats, and over the years we have developed into a major international shipping, transportation and industrial development center that encompasses over 2,400 acres.

The Port is highly diversified, handling a wide range of cargoes, from automobiles and yachts to apples and lumber. The Port’s major terminal facilities are located on two major waterways, the Sitcum and the Blair.

To understand where the Port is today, it is helpful to understand where we started. I would like to show a short (2-minute) video to give some highlights of the Port’s past, and a look at our more current scope of cargo activities.

(An approximately 2-minute long video was shown and the following comments were given throughout the video presentations.)
By the 1920s, we had developed highly efficient terminal areas, a monorail crane for cargo handling and dockside rail service and hammerhead cranes. Rail connections have always been important to our Port's growth and success.

In 1981, Tacoma became the first port on the West Coast to build an ondock intermodal rail yard. By using these dockside intermodal facilities, containers could move through Tacoma to Chicago in 66 hours, and to New York in 100 hours.

Our intermodal facilities and modern terminals have been a major key to our success as a Gateway Port. Our "Intermodal Advantage" has helped the Port of Tacoma attract four of the top ten container shipping lines in the world. "K" Line, Evergreen, Maersk, and Sea-Land.

In 1984, a very historic journey took place between Japan and Tacoma, when a ship made its maiden voyage from Japan carrying two Hitachi container cranes for the new Sea-Land Terminal in Tacoma. This was the first time that cargo of this size had crossed the Pacific Ocean.

The journey showed the world that Tacoma had come of age as a "major league" container port.

Intermodal Connections

One of the lessons we learned at the Port of Tacoma is that the port’s responsibility for helping a major shipping line move its cargo doesn’t end when the container comes off the ship. Regardless of how efficient your terminal operation is, you are not fully serving your shipping lines if you cannot offer the finest in rail, truck and air transportation. As our video showed, our intermodal rail connections have been a big part of our success.

Highway connections are also essential for the quick delivery of containerized, breakbulk, and neobulk cargo. The Port’s shipping terminals are located less than two miles from Interstate Five, a major highway serving the entire West Coast.

Our Port is also well situated for handling sea-air cargo. Containers coming into the Port can be trucked to Seattle-Tacoma International Airport, which is less than 20 minutes from the Port's terminals on Interstate Five.

The Port continually works with City, State and Federal government to ensure that these rail, highway and air connections are well maintained, and that they will be expanded to meet our area’s future growth requirements.

Available Land

Of the Port’s 2,400 acres (972 hectares), over 700 acres (283 hectares) are still available for development. The Port is using this land to develop new warehouses and distribution centers as well as newer and more modern terminals for shipping lines. As I mentioned, we have attracted four major container shipping lines during the last ten years. One of the keys to attracting these shipping lines was being able to offer them the land that they needed as well as land for their future planned expansion. These terminal developments included:

- a 33-acre (13.3 hectares) roll-on, roll-off facility for Totem Ocean Trailer Express, a major shipping line serving the Alaska market;
- more than 100 acres (40 hectares) for a two-berth container terminal for Sea-Land;
- a 35-acre (14 hectares) container facility for Maersk Line, equipped with the Port's first post-Panamax container cranes; and
- the Evergreen Terminal, a high-density container facility which we will be able to expand to meet Evergreen's future requirements.

2010 Plan

To meet the future growth needs of additional shipping lines, the Port has embarked on a 20-year development plan. This plan is known as our "2010 Plan". The plan takes into consideration the fact that the Pacific Rim will see steady trade growth in the years ahead, and much of this growth will take the form of increased container traffic.

A recent study conducted by the ports in Washington...
State is equally optimistic about trade growth during the next 20 years. Predictions from this study indicate that containerized cargo will almost triple, from 13 million short tons in 1990 to 32 million short tons in 2010. The two major container ports in Washington State, Tacoma and Seattle currently have about 624 acres of land that are being used for container shipping terminals. To meet the growth potential in containers, the region will have to add up to 725 acres of additional container facilities in the years ahead.

This projected growth was factored into our 2010 Plan. The study looked at additional cargo projections in break­bulk, bulk cargo and neobulk, as well as how the increased container traffic would impact our highway and rail connections. The point of this planning process was to predict what the needs of the shipping industry were going to be in the years ahead, and make sure we had a comprehensive plan to meet those needs by developing the right facilities at the right time.

The focus of much of this study was the Port’s Blair Waterway, a major Port waterway that will be open to additional expansion when a bridge is removed from that waterway in late 1995. Looking at the hundreds of acres of land that will be available for expansion on the Blair, our 2010 Plan provides the Port with a “road map” for future development. It is a plan that is flexible enough that we can fine-tune it to meet changing needs that might come up during the next 20 years.

Some of you may be familiar with a movie about baseball that was very popular a few years ago. In it, a man decided to construct a baseball field in the middle of a farm in Iowa. He is told by a mysterious voice, “If you build it, they will come”. While that advice might work for baseball players in Hollywood films I don’t think it is good advice for ports in today’s highly competitive global environment. I don’t think a port can afford to build a new terminal or other major facility, invest $50-70 million, and hope that “if we build it, a customer will come.”

In order to be financially sound, ports must make sure they have firm commitments from a tenant before they build a major new facility that might never be used.

With that approach in mind, our 2010 Plan calls for up to $450 million in new terminal and infrastructure improvements, designed to provide:

- six new container terminals with eight new container terminal berths on 309 acres (125 hectares) of land;
- up to three new dockside intermodal railyards;
- two new terminals on 44 acres (18 hectares) for non-containerized cargo;
- a redesigned auto-handling area with 18 additional acres (7 hectares); and
- over 100 acres (40 hectares) of new support facilities.

These developments will help the Port handle as many as 2.8 million containers by the year 2010. The Port plans to develop the West Blair area first, in keeping with plans for environmental cleanups and other infrastructure developments.

**Environmental Issues**

One of the challenges that our port faces, like many other ports in the United States and around the world, is how to deal with environmental issues. Each of our countries might have different regulations in this area but, based on my knowledge of other ports, they all share a common theme — if you can’t solve the environmental issue, you can’t expand your port.

To show you how big a part of our future development plans revolves around environmental issues, let me share with you some figures from our Port’s Five-Year Capital Improvement Program. During the next five years, our Port will spend about $170 million on new capital improvements at our Port. Of this amount, nearly 20 percent, or $33 million, is committed to our environmental projects.

The best example at our Port of how environmental cleanup and Port development can work together is our current Blair-Sitcum dredge-and-fill project. Started last October, this $18.1 million dredging project combines environmental cleanup with other large-scale Port developments. With more than 2.8 million cubic yards of material being removed from the waterways, this is the largest Port of Tacoma dredging project since the Blair Waterway was expanded in 1965.

The project is being recognized as a major success in the area of environmental cleanup. This will be the first federal Superfund project to be implemented in Commencement Bay since the Environmental Protection Agency (EPA) approved the cleanup strategy for the area in 1989. To gain this approval, the Port spent more than three years of planning and review, and we spent about $5 million on testing, design work and planning for the project.

While this is an expensive project for the Port, EPA
officials view the project as a "model for similar situations nationwide."

The dredge-and-fill project will seal contaminated sediments in a filled portion of the Port's Milwaukee Waterway, a waterway that currently splits the Sea-Land container terminal into two pieces. The sediments that are being cleaned up include metals such as lead, copper and zinc that used to be handled at Port docks on Sitcum Waterway.

Once the sediments are deposited in the Milwaukee, the Port will be able to expand the existing Sea-Land Terminal by about 24 acres (10 hectares). To mitigate the environmental loss resulting from the fill, the Port will build a 21-acre (8 hectares) marine habitat area on the outer Milwaukee Waterway. In addition, a 9.5-acre (3.8 hectares) area will be set aside as an additional wetlands habitat for fish and wildlife.

The dredging project is also in integrated with the Port's long-range 2010 Plan for expanded shipping facilities on the Blair Waterway. The Blair will be deepened to 45-48 feet, while the Sitcum will be deepened to 45 feet. This will allow the Port to handle the largest container ships on the drawing boards today.

Like other recent mitigation projects at the Port, the habitat areas the Port will be creating as part of this project show that marine life can flourish in areas adjacent to productive maritime facilities. It is not always easy, or inexpensive, for ports to achieve this balance between business and the environment, but it will continue to be a key for any port's future growth and development in the years ahead.

Industrial Development

In addition to shipping, the Port is also a major site for manufacturing, warehousing, and distribution operations. Companies such as Tredegar Film Products, Dyno Overlays, Tacoma Cold Storage and U.S. Gypsum are all taking advantage of the Port's excellent water, rail, highway, and airport connections to move their cargoes to market cost-effectively. These and other companies are involved in a wide range of activities, including:

- producing plastic film that is exported to Japan for use in disposable baby diapers;
- finishing wood that is shipped to Korea for manufacturing Young Chang pianos; and
- packaging French fries and other frozen vegetables for export to Japan.

The Port Commerce Center, a 120-acre (48 hectare) site being developed by the Port of Tacoma in partnership with a private company called Northwest Building Corporation, is one of the area's most successful industrial development sites. Over $30 million has been invested in new developments at the Port Commerce Center in the last five years.

The Port Commerce Center is located in the Port's Foreign Trade Zone #86, which offers numerous advantages to importers, exporters and manufacturers alike. A variety of companies use the Foreign Trade Zone to install American-made components on products such as cars and trucks built outside the United States and imported through the Port. Duty payment may be delayed or reduced if any value-added work is performed while in the Zone. Tacoma's FTZ ranks second in the United States in terms of dollar volume, handling about one billion dollars of goods each year.

In addition to the Port Commerce Center, another prime industrial development area for the Port is called Frederickson, which is located 13 miles south of the Port terminals. Land at Frederickson is available for purchase from the Port, and is zoned M-1 for heavy industrial use. Boeing is one of the many companies that have set up major production facilities in the Frederickson area. Toray Composites America is building a $40 million plant that will manufacture carbon fiber composites to supply the nearby Boeing plant. A major power cogeneration plant is also being built at Frederickson.

Longshore Productivity

Over the years, the high quality of the longshore labor force has been a major factor of the Port of Tacoma's success. Tacoma's longshore workers are known throughout the world for their productivity and cooperative attitude.

The longshoremen work closely with Port management to ensure that all terminals and warehouses run as smoothly and effectively as possible. In short, the longshore force is a major part of The Tacoma Advantage.

Port Employee Productivity

As I mentioned, we are the sixth largest container port in North America. It might surprise you to learn that our Port has fewer than 220 full-time employees. This has earned us the reputation of being "Lean and Mean". I like to think of it as having the highest quality workforce that is available.

Just as we continually look at innovative ways to move cargo through our ports, we also are continually looking for new means of improving the efficiency of our workforce. We work to achieve this in a variety of ways:

- Through effective communications;
- a port-wide system of establishing goals and objectives; and
- new ways to use computers and other technology to increase productivity and keep our operating costs down.

In summary, the Port of Tacoma underwent a dramatic transition in the last ten years into a world class container port. The same advantages that got us there — such as intermodal rail facilities, land for expansion, and a high quality workforce — will help us to continue to grow and strengthen our leading role in international in the years ahead.
IAPPH and Maritime Transport-related Development from a European Perspective

Speech at the 7th IAPH Japan Seminar
October 13, 1994 in Tokyo

By A.J. Smith,
IAPH European Representative,
UK

1. The World Economy and European Ports

I believe we can say with some confidence that the last world trade recession is now over with economic indicators pointing upwards to recovery. The strength and speed of recovery however is unevenly spread between the world's regions. Asia and America for example have powerful growth rates compared with our European situation. Nonetheless a projected 3% average growth rate for the world economy is a very welcome sign for maritime transport. The finalisation of GATT's Uruguay Round gives added emphasis to our hopes for increasing trade between our nations. The effects of increasing maritime trade, however, have not fallen evenly on European ports. That is understandable when account is taken of changing trade patterns and the post-recession demands which are made on port facilities and services by port users.

Europe, for example, is subject to competition from newly industrialised countries. Even within Europe it can be said that western areas are having to contend with the more economical production locations of the east. Older industrialised nations such as America are looking to new trade routes. Trading concepts such as the "Just in time" and "zero inventory" schemes not only impact on the transportation pipeline by calling for precise schedules and standardised units, but also determine the location of ports of call.

Europe's ports therefore have much to consider and, in conditions of ever-increasing competition, have only a limited time in which to determine the trading areas in which their future lies and initiate the required investment programmes which are an inevitability of decisions taken. In the event, my overwhelming and very general impression in travelling through European ports is of a face-lifting process in which existing facilities are being upgraded and new berths are under construction to make a bid for a slice of the post-recession expansion expected, and very largely under way, of cargo traffic, ship movements and passenger traffic.

2. Some Port-related Developments

In such a brief commentary as this on the panorama of European ports I have been selective in highlighting issues to which I think your attention should be drawn. Moreover, I have referred to European nations and ports by name only sparingly so as to place emphasis on a specific point.

2.1 Employment

I believe it's fair to say that conditions of employment have been the most significant factor in deciding the future direction to be taken by European ports in the post-recessionary period. The inescapable fact is that port users closely examine a port's pricing and service position in relation to that which is offered and/or provided by its competitors. Ports and their stevedoring organisations are very much aware that these factors are dependent on a cooperative and reasonably priced labour force.

Historically, dock labour has occupied entrenched positions at European ports. In the prevailing competitive climate success or failure in altering these conditions to provide for the perceived needs of port users has determined the ports' capacity to attract the desired traffic.

In the United Kingdom, for example, a number of pre-recessionary circumstances allowed ports to sweep away entrenched dock labour positions. Sharp reductions in the labour force at all ports have been facilitated and indeed have taken place. A range of flexible services at competitive prices is now offered to and gratefully accepted by prospective customers. By way of contrast, France's port reform programme, embarked upon during the recessionary period, has been slow to come to fruition. Reforms to employment conditions have resulted in strikes or slow-downs to the detriment of port management's desire to attract and hold traffic. Management has indeed been inhibited in managing the ports' resources in the way that they would wish.

Variations of these circumstances are current in the other European countries. All, however, at one time or another in the recent past have suffered to some degree from the growing pains of port restructuring particularly where that has resulted in a reduction of the real income of dock workers.

2.2 Privatisation

Not too long ago in the United Kingdom when a so-called enterprise culture was in the ascendancy, implementation of the concept of privatisation was regarded as the panacea for all the ills which had befallen society generally and, from our standpoint, the port transport industry in particular.

Early examples of port privatisation have indeed proved highly successful. So much so that it was not long before ports elsewhere began to be measured up for what was thought to be necessary restructuring.

Europe remains committed to a market economy in which the principles of privatisation are generally acceptable.
It is still regarded as a major option in securing an inflow of capital and expertise for the modernisation of port operations. Its implementation however is now more cautiously approached by port management. Greater attention is being given to what is in fact the best structure for the port from an operational standpoint. Available options are being closely examined in addition to the most important matter of managing the process of change itself.

2.3 Intermodalism

Growth in the application of the intermodal concept is somewhat restrained in Europe at present time notwithstanding that the existence of a single market covering the European Union has created the conditions necessary for intermodalism to flourish.

The problem is that the European Union lacks a coherent transport policy and that situation will not be facilitated by the inclusion of some Scandinavian States into the Union. In an intermodal context, for example, small and archipelagic areas do not need it. The advent, moreover, of environmentally friendly policies does not give the requisite encouragement to an expansion of road transport. Inland water transport and rail freighting are the net gainers in this situation and ports have therefore been consolidating their positions in these respects. It would be expected, for example, that the Rhine/Main/Danube waterway will be making every effort to re-establish itself as the main transport route linking the North and Black Seas.

The principal European ports nonetheless remain mindful of the fact that intermodalism will be generating between 9 and 11 million movements by the year 2000 and are therefore preparing their infrastructure accordingly to meet that challenge.

2.4 Inter-port Cooperation

Competition between ports does not preclude the possibility of inter-port cooperation. Even where competition is most acute, as for example in the European area, a strong case can be made for encouraging a spirit of cooperation and the adoption of measures devised and agreed collectively for mutual benefit. That is not a statement which should surprise you in so far as our presence here today owes much to the efforts of IAPH which in itself is an excellent example of the cooperative spirit of world ports in action.

In Europe however the nature of inter-port cooperation is interesting in one very specific aspect, namely where it reflects I believe in large part a general desire for commercial success.

At one extreme it is possible to observe circumstances in which two ports, for example, mutually establish the basis for a traffic rationale. Their organisational structure may then make it possible for them to merge; in effect to become a single identity. The Port of Liverpool and the Medway Ports Authority of the UK have in fact taken such a step. Their merger is proving to be very successful.

Another approach to inter-port cooperation could be on the lines of that taken by the Ports of Gothenburg and Zeebrugge. These ports have formed a jointly controlled company, a prime objective of which is to develop both ports to equal standards leading ultimately to the establishment of a fast transport link between them. They expect to cooperate in areas such as information technology, logistics, loading and discharging of ro-ro and lift-on lift-off traffic, marketing and customs procedures. Their expectation is that by so doing they will mutually be better able to meet the needs of their customers.

The extent to which that approach may be a useful guide for other ports will depend, in the main, on their having the kind of mutual goodwill and understanding which continues to be shown to each other by Gothenburg and Zeebrugge.

We should also reflect on a pattern of inter-port cooperation which has covered the Baltic area with the formation of the Baltic Ports Organisation (BPO) in October 1991.

This cooperative endeavour is trade-driven. Speaking in very general terms, my impression of the Baltic area at the present time is one in which trade is static but with the potential to become very active – perhaps even dramatically so - as the economies of the States which were previously included in the Soviet Union are stabilised. A prime factor in securing the hoped-for impetus will be the acceptance of short sea shipping as a more effective form of transport than the highly subsidised road and rail systems which are in the ascendancy at the present time.

In these circumstances it is not surprising that the BPO is carrying out a major study of current and future trade prospects for the Baltic area. The beneficial effect of inter-port cooperation will then become a reality in co-ordinated development measures and investment in and specialisation of port facilities.

Continuing on the theme of inter-port cooperation, it is my personal view that the possibilities of trade enhancement and traffic growth were not the prime reasons for the formation of the European Sea Ports Organization (ESPO) in January 1993.

ESPO's membership includes the sea ports of the eleven maritime states of the European Union. The interests of sea ports in five of the states currently seeking membership of the European Union, namely Finland, Iceland, Malta, Norway and Sweden, are also covered. The common factor then is the European Union. It is therefore understandable and very appropriate that, on the one hand, officials of the European Commission should feel the need to be able to relate to a representative body from the port transport industry of the Union and bring pressure to bear to ensure that such a body, ESPO, was put in place. On the other hand, it is also very pertinent for the sea ports of the Union to want to be satisfied that their interests, in relation to the remit of the European Commission are safeguarded.

Given the disparate nature of the ESPO membership so far as size, development, membership and management philosophy are concerned, it is not surprising that the evolution of agreed positions capable of general applicability can be a long and drawn-out process. These, however, are early days in ESPO's existence and we can be certain that steps are being taken to ensure that effective policies are available as and when they are needed.

The existence and availability of coherent policies is of particular importance to ESPO in so far as the organisation’s raison d’etre, as we have noted, is to promote policies and viewpoints of European sea ports with the authorities of the European Union. In other words, the generality of port transport industry problems are of primary interest to ESPO only in so far as they can be put into the context of the treaties establishing the European Union.

ESPO does not therefore duplicate IAPH activity as such. The activity areas of both IAPH and ESPO are presumed to be complementary. Certainly that is how we in Europe see it. There is every reason to suppose that the broad spectrum of the IAPH membership would also take
a similar view. ESPO has a commitment to be both proactive and reactive to the build-up of pan European legislation affecting, or likely to affect, European sea ports. Such legislation emanates in an increasingly aggressive form from the authorities of the European Union. These authorities are the European Commission operating through a series of Departments leading eventually to the Council of Ministers, and the European Parliament.

For the purpose of this presentation it may be of interest to you to know of the subject areas being examined by these authorities which impact in some way on the global port transport industry in addition to their purely European significance.

2.5 European Union

European sea ports like every other activity area are of course subject to their respective national legislation. In a maritime transport context that legislation is increasingly likely to emanate from the European Union through its Commission and Parliament. Implementation of that legislation nationally can and does give rise to anomalous situations because it has to be set alongside differing politico/governmental philosophies and varying port organisational structures. European port managements therefore are now necessarily very alert to initiatives from the European Commission, and will now expect to be able to make positive, realistic and informed contributions to their debate at the earliest possible stage. They wish to ensure that their local or national interests and/or concerns are fully understood and taken fully into account in the process leading to the enactment of legislation.

Central to the Commission's thinking is a common transport policy collectively endorsed by the Council of Ministers in 1992. To facilitate implementation of that policy the Commission is collecting information on ports and their relevance to a European Transport Network in the different regions of the Union described as the Baltic, North Sea, Atlantic Arc and Mediterranean. The stated intention is to provide an overview of main traffic flows and future trends to establish "desirable objectives for upgrading ports and improving their position in the transport chain".

A principal concern is that decisions made as a result of the findings will most likely not reflect adequately the commercial needs of the ports. Ports generally are not happy with the prospect that investment decisions may be directed by a central bureaucracy as distinct from market forces which would be expected to provide a stimulus to efficiency and innovation.

Environmental factors can and do act as a stimulus to the movement of traffic away from the already congested road systems of Europe into alternative transport systems. Short sea shipping has been highlighted in that regard particularly where it enables cargoes to be moved close to the point of consumption.

Ports generally are normally amenable to allowing market forces to determine the transport system to be used. Where freedom of choice is inhibited as for example by introducing the environmental factor, ports will want to ensure that they have the opportunity to play a full part in an enhanced short sea shipping regime should they wish to do so. That in turn suggests that they should have access to low interest loans, if need be, to create the necessary infrastructure for the functioning of the service. Proposals such as these have been put the Commission.

Following maritime accidents in the European area during 1992/93, Union Transport Ministers have focussed attention on a number of issues which are normally left to be dealt with by the International Maritime Organization (IMO). Their contention is that measures need to be taken regionally additional to any which may be taken by IMO. More perhaps to the point, they believe that in certain circumstances unilateral action can and should be taken by the region if IMO appears to be procrastinating in any way. The issues which have given rise to this somewhat aggressive posture are:

- **Safety of Ferries** — the implementation of more stringent regulations including coordinated control between Port and Flag States.
- **Ship Reporting-Ship Routinge** — requiring mandatory reporting by ships operating in some areas, and specific routeing for ships carrying hazardous substances or dangerous goods.
- **Closer North Sea Surveillance** — to facilitate rapid intervention if need be.
- **Strengthening Port State Control Requirements** — including enhanced data exchanges and a more rigorous regime of ship detentions in port until deficiencies are rectified.
- **Cargo Stowage and Security** — intending to make the IMDG Code and the Code of Safe Practice for Cargo Stowage and Security mandatory.
- **Liability** — strongly encouraging adoption of the draft HNS Convention in 1996. If it fails they intend to establish a regional compensation system. In any event European Union countries now appear strongly to support a substantial increase in the limits of liability set out in the 1976 Convention on Limitation of Liability for Maritime Claims.

The region's ports very naturally will pay close attention to these developments in so far as all of them impact on port operations to some extent.

The European Union has adopted a Common Policy on Safe Seas, the objective of which is to improve maritime safety and pollution prevention in European waters. The aim in the first instance is to strive for convergence of existing international rules and measures and to secure their tighter enforcement.

The Policy also includes provision for the development of VTS infrastructure including a system of mandatory reporting to the VTS centre in zones covered by VTS. In this regard, the Commission is examining the feasibility of a mechanism to recover the costs of the provision of the required services, and aids to navigation from users. Again European ports will be trying to avoid a situation of overlapping VTS systems and distortions to their competitive position.

The catalyst perhaps in bringing European ports to a full realisation that the activities, discussions and conclusions reached by IMO are indeed of importance not just to the maritime world of shipping but also to port operational responsibilities was the single question of rewarding, in some way, tankers with segregated ballast tanks.

IMO Resolutions on the subject, taken out of context in my view by officials of the European Commission, have given rise to the issue of a draft regulation by the Commission requiring segregated ballast tank tankers to be rewarded by a percentage reduction in port tariffs.

You will not, I suspect, be surprised when I tell you
that European ports are united in their opposition to this measure on the very basic grounds that it is entirely wrong in principle for the Commission to introduce a measure which interferes with port tariffs which must, we believe, be determined by the ports themselves.

There is a present impasse on this question. Current port thinking favours the adoption of a differential of at least 10% on tonnage fees in favour of SBTs as a possible compromise position. By referring directly to the SBT issue I wish to stress two points. Firstly, as I have said earlier, what IMO is doing really does have a relevance for the world's ports. Secondly, the authorities of the European Union are very capable, and on occasions are quite determined to impose their will on the ports of the European Union. The ports, understandably, are taking all possible measures to pre-empt such actions.

The remaining authority of the European Union is the European Parliament, the powers of which have recently been strengthened by the Treaty of European Union, particularly so far as decision-taking on policies is concerned. Draft policies and directives must be submitted to Parliament by the Commission for advice and/or amendment.

European ports are alert to the opportunity given to them by a strengthened Parliament to ensure that port viewpoints are understood and, in the event, are reasonably acceptable. Situation such as that which has arisen with SBTs can hopefully be avoided in the future. European ports certainly, are making their voices heard at Parliament hearings involving maritime transport policies as, for example, on port aspects of the Common Transport Policy, and also on the implications, in particular, of that Policy for the ports of Southern Europe.

3. International Maritime Organization (IMO)

While it may be possible for European sea ports, with their newly awakened awareness of international geo-political realities, to influence the final outcome of maritime transport initiatives from the European Union, they have become aware of and sensitive to the importance of an underlying truism. In the activity areas of safety at sea and marine environmental protection it is IMO which establishes the global regimes which will be applied and/or adapted (always at a higher level) in the regions and by Maritime States.

For that reason, therefore, amongst others, European ports are arranging to carry out a continuing examination of IMO activities. They have taken up an offer from the European Commission to examine all IMO Resolutions relating to maritime safety and environmental protection and to make recommendations on which of these in the fullness of time should become regulations. The corollary is that the European Union, in reaching a collective agreement on related issues, is aware that it can become a powerfully persuasive platform from which to launch initiatives into the decision-making bodies of IMO for possible adoption in time by the global maritime transport industry.

Let us therefore take a closer look at IMO. IMO's existence as a United Nations Agency dedicated exclusively to maritime matters began in 1958. It has a membership at the present time of some 150 Maritime States. Additionally, some 50 non-governmental organizations to which IMO has accorded Consultative Status have the privilege of participating in IMO's discussions and submitting documentation for consultation by IMO.

Consultative Status was accorded to IAPH in 1967. Organisationally, IMO's governing body is the Assembly of Maritime States which meets once every two years. The next Assembly will be held in the latter part of 1995.

Between sessions of the Assembly IMO is governed by a Council of 40 Member States elected by the Assembly.

Since its inception, IMO has insisted that its work should be free of political orientation. It takes pride in being a technical organisation committed to enhancing safety at sea and marine environmental protection.

The work of IMO is carried out in a number of institutional committees and their sub-committees. These are the Maritime Safety Committee with Sub-Committees dealing with Safety of Navigation; Radiocommunications; Life Saving; Search and Rescue; Training and Watchkeeping; Carriage of Dangerous Goods; Ship Design and Equipment; Fire Protection; Stability and Load Lines and Fishing Vessel Safety; Containers and Cargoes; Bulk Chemicals; and Flag State Implementation.

The Marine Environment Protection Committee has also an interest in Bulk Chemicals and Flag State Implementation.

The Legal Committee; the Technical Cooperation Committee; and the Facilitation Committee complete the picture.

The Secretariat of IMO is led by the Secretary-General, Mr W A O'Neil, and staffed by a highly motivated team of international civil servants.

Membership fees are calculated on the tonnages registered to the respective Flag States.

IMO is a dynamic organisation with a well-merited reputation amongst UN Agencies for its application and performance in dealing with a wide range of maritime-related problems. The so-called "IMO spirit" is widely known for its success in achieving consensus amongst its Member States. It is adaptable, realistic and pragmatic. With that underlying ethos it had no hesitation for example in approving an initiative from the Secretary-General to establish a Working Group on Ship/Port Interface (SPI).

The initiative was an explicit recognition by the Organisation of the vital importance of the world's seaports in facilitating the achievement of IMO's twin goals of safety at sea and environmental protection.

Over the years, IMO has promoted the adoption of some 30 Conventions and Protocols, and the adoption of nearly 800 Codes and Recommendations covering safety, pollution prevention and related matters. In addition, IMO is the repository for the activities of the London Convention, 1972 dealing with disposal of wastes at sea, and the International Oil Pollution Compensation Fund.

All that is, of course, a fearsome commitment which if implemented fully by IMO's Member States would radically change the maritime picture for the better. Life, however, as we know it is simply not like that at all.

For good, or bad or indifferent reasons world-wide acceptance, adoption and effective implementation of IMO-related Conventions, Codes and so on, is not a present reality. Indeed it is said from time to time in IMO that enough is enough. In fact two IMO Resolutions now make the position very clear.

Resolution A500 (12) reinforced by Resolution A777 (18) makes it plain that proposals for new conventions, or amendments to existing conventions will be entertained only on the basis of clear, well-documented, compelling need and having regard to the costs to the maritime industry, and the
burden on the legislative and administrative resources of Member States.

What is being said in effect is that we all know that there will inevitably be specific situations in which issues arise which demand our attention, and urgent remedial action as, for example, in the aftermath of maritime accidents and which we should apply our energies and expertise to developing ways and means of facilitating effective implementation of the Conventions, Codes and so on which are already on our shelves.

Even so, the workload remaining to be dealt with by IMO is very heavy. To add to that problem IMO is subject to severe financial constraints. If, however, progress is to be made in dealing with the workload, it is essential that Member States should be able and willing to contribute expertise and time on IMO's behalf. The response, in turn, to that requirement is of interest to all of us in that it will markedly influence the nature and substance of the conceptual position to be taken by IMO on the issues with which it must deal.

Until very recently, and even now to a large extent, discussion documents originated mainly from ideas developed by the older developed nations of North Europe, the United States and Japan. It was right that they should do so in so far as their shipping registers effectively controlled the merchant fleets of the world, and IMO's orientation was initially to secure the safety of that fleet and their crews and passengers.

The rapid extension of shipping registers established by other less developed nations means that Flag State control is no longer exercised exclusively by States with a primary interest in the safety of shipping. Other factors must be taken into account. This has given rise to a notable change of emphasis and even direction in IMO's output.

The entire question of implementing the myriad rules, regulations, codes and recommendations of IMO is now a real problem. This is compounded by the complexity and remedial costs of problems associated with IMO's assumption of responsibility for marine environment protection.

To take just one example; the concept of environmental protection was by no means the highest priority on the socio-economic and political agendas of developing nations in 1971 when the Conference which gave rise to what we now know as MARPOL 73/78 began its discussions. Their acceptance of the MARPOL Convention commits them, nonetheless, to the provision of adequate reception facilities for ships' wastes amongst other things, at a cost for which funding has been difficult to obtain. Over 20 years have gone by and the problem remains to be resolved. We may suppose that the idealism of the early proponents of environmental protection should have been tinged at least to some extent with the economic realities of the developing States to the extent that some attention should have been given to funding the costs of their decisions. It was certainly made clear at the time by IAPH representatives and others that the absence of reception facilities would place the work of IMO's Committees and Sub-Committees in jeopardy.

For reasons to which I have alluded earlier the thrust, direction and pace of IMO's endeavours are being transformed by an awareness, authoritatively expressed, as to where national and regional priorities lie. IMO's often unavoidably detailed and complex agendas are not, it should be said, being disregarded. It is rather that they are being selectively adapted to reflect a perception of what realistically can be achieved.

I have sought to make it clear in my earlier remarks that the work of IMO's Committees and Sub-Committees impacts increasingly on port operations. IAPH, therefore, as the representative voice of the world's ports at IMO has a special responsibility to ensure that their interests are taken fully into account in all IMO's port-related discussions before conclusions are finally reached and agreed action initiated.

IAPH has taken this responsibility seriously and has committed itself both to enhancing the provision of technically competent representation of port viewpoints at relevant meetings, and to providing authoritative discussion papers on matters to which it has accorded priority.

The medium through which these efforts will flow is the IAPH/IMO Interface Group established at the Copenhagen meeting of IAPI's Executive Committee last June. The Group, chaired by Mr. Jean Smagghe, 2nd Vice-President, IAPH, is representative of each of IAPH's regions and includes in its membership the highest level of port management.

The Group's intention is not solely to mirror the activities of IMO's Working Group on Ship/Port Interface to which I have referred earlier, though very naturally that will be a principal task. The Group will also scrutinise in finer detail the broader spectrum of IMO Committees' activities than has been the case so far as prioritise matters for more detailed attention by IAPH's Technical Committees.

A positive start has already been made. Papers have been submitted for inclusion in the agenda of the meeting of IMO's Working Group on Ship/Port Interface on 24-28 October 1994, dealing with:

Financial and Organisational Aspects of Port Reception Facilities;
Education and Training of Personnel charged with the Handling of Dangerous Substances as General Cargo in Ports;
Risk Analysis and Contingency Planning;
Problem Ships in Ports; and
Use of EDI for Ship/Port Interface.

Chairmen of IAPH Committees have been kept informed of the developing IMO situation and are expected to monitor events there closely. Particular matters to which their attention has been drawn for possible action include:

**Maritime Safety**
Vessel Traffic Services and Ship Reporting Systems
Port Implications of Aspects of Port State Control
Cargo Stowage and Securing
Links with the International Ship Information Database
Safety in Dock Work
Piracy and Robbery against Ships

**Marine Environment Protection**
Prevention of Air Pollution from Ships
Floating Reception Facilities for Ships' Wastes
Marine Pollution, Preparedness and Response Measures
Harmful Marine Organisms in Ballast Water

**Legal**
Development of a Hazardous and Noxious Substances Convention
Revision of the 1976 Convention on Limitation of Maritime Claims
Arrest of Ships in Ports

(Continued on Page 25)
The Internalization of External Environmental Costs and Sustainable Development

Order from: Sales Section, Palais des Nations, 8-14 Avenue de la Paix, 1211 Geneva 10, Switzerland. Fax: 011-41-22-917-0027.

The internalization of environmental externalities is a necessary step towards the achievement of sustainable development. However, the problems associated with internalization are extremely complex. This Discussion Paper seeks to clarify the factors underlying such complexity and to suggest alternative ways of addressing them at the national and international levels.

Solving the internalization dilemma requires first of all accepting that much of the mismanagement of the environment is due to the malfunctioning of markets or to policy failures induced by government interventions, and devising the most appropriate corrective mechanisms compatible with the improvement of conditions for sustainable development.

Precisely because the feasibility of the internalization approach is very much dependent on the strategy selected for its implementation, the Paper also seeks to identify the various instruments for internalization available to governments, and proposes alternative scenarios for achieving an appropriate combination of these instruments.

Finally, the advantage of cooperative solutions is stressed, together with the identification of the various existing or potential mechanisms for achieving internalization at the international level. The role of trade as a vehicle for internalization, as well as the great potential of incentives for environmentally-sound switching, are also examined.

Accounting, Valuation and Privatization

United Nations publication; Sales No. E.94.II.A.3.
Order from: Sales Section, Palais des Nations, 8-14 Avenue de la Paix, 1211 Geneva 10, Switzerland. Fax: 011-41-22-917-0027.

This UNCTAD study examines the accounting difficulties faced by the United Kingdom, France, Hungary, Germany, the former Czechoslovakia, Poland, Mexico and Sudan in privatizing, and identifies key problems and solutions.

Valuing the businesses to be privatized is the most thorny problem of all. This is partly due to the fact that nearly all government enterprises worldwide use accounting systems not based on profit-and-loss considerations. As a result, there is no proper presentation of the financial viability of the enterprise. The most urgent issue facing governments, the study argues, is possibly to involve the public more closely in privatization.

Davis Helberg Installed As Chairman of AAPA

Davis Helberg, executive director of the Seaway Port Authority of Duluth, Minnesota, was installed as the new Chairman of the Board of the American Association of Port Authorities (AAPA), during the Association’s 83rd Annual Convention at the Wyndham Franklin Plaza Hotel.

His installation as Chairman of the Board follows several years of active service on AAPA’s Executive Committee and U.S. Legislative Policy Council. Helberg succeeds Raúl Urzúa Marambio, director of the Chilean ports, Empresa Portuaria de Chile (EMPORCHI). Helberg is only the fifth AAPA Chairman of the Board from the U.S. Great Lakes ports in the Association’s 83-year history, and the first Chairman from Duluth.

During AAPA’s Annual Convention, Helberg talked about some of his goals for the Association in the coming year. “An elemental problem to all of us in the port industry is the low profile that waterborne transportation has with the general public, the news media and elected officials,” Helberg said. “We need to find more effective ways of telling our story. AAPA has recently developed some excellent educational tools for its members. We will strengthen and enhance those programs.”

“For example,” Helberg added, “the
implementation of our new Certified Port Manager (CPM) program highlights the importance of training and recognizes the professionalism of the field of public port management. The CPM program, which is focused today on U.S. and Canadian port managers, will over this next year be applied to the needs and priorities of Latin American and Caribbean professionals.

"Thanks to AAPA’s outgoing chairman, Raul Urzúa, our programs for Latin American ports are well underway," he added.

"AAPA will also focus on the needs and interests of our medium to smaller ports, which have special challenges and opportunities. The smaller ports have strong economic and political ties to local and state government, which enhance the Association’s public awareness and advocacy efforts," Helberg said. "But equally important is the critical role the diverse array of ports play to our country’s economic, transportation and national security interests."

"The integrity of AAPA is linked with the vitality of all our member ports and countries. The interests of U.S. ports, which frequently look to AAPA first and foremost as a legislative advocate, must be balanced with those of the Canadian, Caribbean, and Latin American ports, which tend to rely more on AAPA for basic membership and support services. With the dynamic growth in Hemispheric trade only projected to increase in the coming years, the modernization of port infrastructure and administration throughout AAPA member counties is vital. AAPA has an essential function, widely recognized and appreciated, to assist in that process through the exchange of knowledge and training," Helberg continued.

Sec’y Peña Receives Port Person of Year

U.S. Secretary of Transportation  
Federico Peña received the first ever “Port Person of the Year Award” from the American Association of Port Authorities (AAPA) during its 83rd annual convention at the Wyndham Franklin Plaza Hotel.

Before over 700 delegates and guests AAPA President Erik Stromberg presented the award following a luncheon speech given by Secretary Peña. “More than any Transportation Secretary in memory, Federico Peña has recognized the critical role of ports in the U.S. transportation system. He is committed to resolving port needs as an important part of his Department’s goals,” Stromberg said.

According to the AAPA, Secretary Peña’s efforts have included addressing the dredging crisis plaguing U.S. ports and resolving ports’ landslide access needs through creation of the National Transportation System. Secretary Peña has also demonstrated strong and personal support for free and fair international trade through the North American Free Trade Agreement and the GATT Uruguay Round.

Secretary Peña created the Interagency Working Group on the Dredging Process in October 1993. It is currently preparing a report which will recommend ways to improve coordination of federal agencies involved in the dredging permit process.

"It is only because of Secretary Peña’s leadership that all the agencies involved in the dredging process have, for the first times, acknowledged the problem and are working together to improve the system," Stromberg said.

By promoting the creation of a truly intermodal National Transportation System, Secretary Peña recognized the importance of ports in transportation planning. Ports have been included in all ways in this process, as key links to be included in the system as well as participants in the efforts to design it.

Under his leadership, the modal administrations that make up the diverse Department are coordinating their efforts in ways unheard of just a few years ago. Secretary Peña has been instrumental in ensuring the implementation of a seamless intermodal freight transportation system. He recognizes the need to focus on freight at state departments of transportation and metropolitan planning organizations.

Secretary Peña has also made increased international trade, and with it increased cargo moving through our ports, a priority. He was a major supporter of NAFTA, not only as a member of President Clinton’s cabinet, but also because of his strong personal commitment and efforts.

“With Secretary Peña at the helm, ports can be confident that needs of intermodal freight are high on the agenda as we work through the process of approving the National Highway System, developing the National Transportation system, and reauthorizing ISTEA in the coming years,” Stromberg concluded.

Thunder Bay to Keep Canada Competitive

The Thunder Bay Harbour Commission was one of 13 organizations making submissions to the St. Lawrence Seaway Sub-Committee of parliament’s Standing Committee on Transport at the hearings held in Thunder Bay in June. MP Joe Comuzzi, Chair of the Sub-Committee, will have the report in the hands of the Minister by early September.

The Harbour Commission’s submission contained recommendations on revitalizing and ensuring the competitiveness and continued existence of the Great Lakes/Seaway System. The Seaway is imperative to Canada’s manufacturing heartland and to its and our country’s ability to trade globally.

The Commission, in its submission, documented the current situation with regard to Seaway traffic, trends in the domestic fleet and ocean-going vessels, and the competitive environment including the Mississippi River and rail competition.

The submission also includes the effects on the Seaway of the Western Grain Transportation Act (W.G.T.A.) and its reform as well as other major issues including government imposed costs, cost recovery and environmental concerns.

Specific recommendations calling for the federal government’s support are summarized as follows:

Recommendation Summary
- incentive programs to modernize/build Great Lakes-capable vessels
- a competitive review of government controlled transportation costs, railway taxation policies, railway practices with regard to equitable Canada/U.S. pricing and non-compensatory rail rates
- an in-depth consultation process regarding the proposed rail monopoly;
sustaining the existing pooling system unless the modal bias is removed from the W.G.T.A. subsidy and a call for the removal of such bias along with compensation provisions

- the Seaway's viability if alternative options for paying or discontinuing the W.G.T.A. subsidy are considered
- an independent cost/benefit analysis regarding, and the elimination of, Seaway tolls
- flexibility for, and review of, the operational mandate of the St. Lawrence Seaway Authority
- a binational pilotage directorate and a review of existing regulations and practices
- a fixed navigation season for the Seaway and a feasibility study for System expansion
- harmonizing the bi-national management of the Seaway
- a public and commercial consultation process regarding the government's cost recovery programs and assurances that any cost recovery policy will be guided by principles that include multi-user and system wide impacts
- an agreement with the U.S. that ensures compatible practices with regard to cost recovery in the System and avoids any cost duplication
- a policy that minimizes negative environmental impacts inherent in the transportation of goods and sustains the Seaway route through enlightened public policy

(Transport of Thunder Bay)

13-vessel PAX Service Adds Halifax to Roster

An important liner service has just opted to add a double call at the Port of Halifax to its itinerary. It will call twice weekly in Halifax, soliciting both Far East and European cargo. This means 104 additional calls for Halifax.

The 13-vessel PAX Service, operated by Hapag-Lloyd, NOL, and NYK Line, will add a call in Halifax to both legs of its “pendulum” service. The service runs from the Far East, to the US West Coast, through the Panama Canal, up the US East Coast, over to Europe, and back.

The consortium’s AEX service, sailing from the North American East Coast to Southeast Asia via the Suez Canal, already calls in Halifax.

The Halifax Port Corporation estimates that the new service will bring almost 250 direct and spinoff jobs, and $12.6 million in direct spending to the Halifax area economy.

Halifax Port Corporation President & CEO, David Bellefontaine, says, “The consortium’s new service represents a turnaround for the Port. In 1991 Hapag removed their ships from service to Halifax, opting to charter space on ACL ships. Hapag-Lloyd ships are now back, but even better, they are bringing extra NOL and NYK vessels with them.”

The Halifax Port Corporation gives credit for the new business, to the world class competitiveness of Halifax. Halifax has an excellent location ("first inbound and last outbound" port of call between North America and Europe), generous pricing incentives, and important double-stack service connections.

Subzone Status Helps Firms Reduce Cost

The Port of Long Beach, through its federally granted Foreign Trade Zone (FTZ), recently administered special subzone status to two manufacturing sites operated by a local computer electronics firm. The status allows Alps Manufacturing, U.S.A. to sustain 300 jobs and reduce taxes and production costs.

The subzone status extends FTZ privileges to Alps’ facilities in Compton and Garden Grove. These privileges include the manufacturing of duty- or tax-free electronic and computer products for export.

The products made at Alps’ FTZ-sanctioned sites are treated by U.S. Customs as if they have not yet entered the flow of U.S. commerce. Only products that enter the U.S. market for consumer consumption are taxed.

The subzone status offers these significant tax breaks through reductions and referrals of U.S. Customs duties, which mean lower production and exporting costs for Alps.

The subzone status also allows Alps to sustain jobs by modifying imports produced in Compton and Garden Grove.

Corky Meyers, a representative from Alps, said about 300 jobs — ranging from administrative to assembly technicians positions — are maintained because of the status’ benefits.

“All these benefits translate into big savings for companies that have the special subzone status,” said Port Director of Properties Dick Steinke, the manager of the staff that oversees the granting of the subzone status for the U.S. Commerce Department.

The status provides Southern California firms an edge among its national and international competitors. “Subzone status gives equal footing to local firms that want to export on a global scale through the lesser duty rate,” said Steinke.

FTZs were initiated in the late 1930s as a component of former President Franklin D. Roosevelt’s New Deal plan for economic prosperity. FTZs helped to propel the U.S. as a leader in world trade.

The Port of Long Beach was granted FTZ status in 1979. Since then, it has extended subzone status to five Southern California businesses.

“The Port of Long Beach invites local business people to take advantage of the port’s FTZ status,” said Carmen O. Perez, president of the port’s board of commissioners. “The port assists entrepreneurs who want to succeed in the international marketplace, which strengthens our economy at home.”

Seattle: Record Year for Chill Operations Seen

Early part of October last the Port of Seattle’s chill warehousing operations kicked into high gear with the start of the export season for Washington apples and pears. The Port expects to handle more than 4 million cartons of the 1994 crop between now and the end of the year — increasing total chill facility exports by 25 percent over 1993 activity. Another 1 million cartons are expected to be moved through the chill facility in early 1995 as large shipments of this year’s crop requiring breakbulk handling are completed.

Earlier this year the Port put into operation a new, 88,000 square foot chill warehouse bringing the Port’s chill
warehousing capacity to 202,000 square feet. “Expanding our chill warehousing was critical to meeting the needs of our customers and supporting the growth in agricultural exports generated by Eastern Washington communities,” said Port Commissioner Jack Block. “It was a multi-million dollar investment which also puts Seattle on the map” as the port with the largest, on-dock chill warehousing along the West Coast. In terms of quality fruit handling facilities we’re now the industry leader and hope to not only support the growth in the Washington apple export industry, but also handle other import and export products requiring chilled storage.”

Fruit handling at the Port’s chill operations has increased at an average annual rate of four percent over the past 10 years. In 1983, 2 million cartons of Pacific Northwest apples and pears were handled along with 400,000 cartons of New Zealand apples. In 1993, the total apple and pear volume through the warehouse was nearly 4 million cartons. Export markets for large shipments of Washington fruit products which take advantage of the Port’s chill operations include countries in the Middle East, Europe and South America. Apples and pears also are shipped by containers — to developing markets and also as the season comes to a conclusion.

Port of Charleston: State of the Port Address

W. Don Welch, executive director of the South Carolina State Ports Authority, presented his annual State of the Port Address at a meeting of the Charleston Chapter of the United States Propeller Club on September 13. As the one who has been steering the Port of Charleston’s development since 1971, Welch briefly commented on the past successes of the SPA. He glanced at the past like a competent driver checking the rear-view mirror, and kept his focus on the road ahead.

“The 1993/94 fiscal year was a record year for Charleston, as we handled 7.5 million general cargo tons,” Welch began. “As usual, containerized cargo paced the field, surpassing the previous year by 9.4 percent. Each of the months of March, April, May, June and July exceeded 600,000 tons of containerized cargo. On several occasions during this period, 14 of Charleston’s 15 container cranes were being utilized, along with all of its transtainers and toplifters.”

Welch noted that publicity on the port’s record-breaking year was slim. “ Apparently, running at that record rate does not make a real news story,” Welch continued. “You and I know that it was a story because collectively, we helped make it happen. I suppose big boxes just aren’t sexy.”

One major news event at the Port of Charleston in June 1994 did make the nightly news on all the local television stations and the front page of the newspaper. “Sixty BMWs — their first shipment to reach the port. That’s the difference between what is sexy, and what is not. Those sixty BMWs were the precursors of 60,000 BMWs that will be coming through the port within the next couple of years. That’s big news.”

The port’s relatively new partnership with BMW parallels other port relationships in their infancy stages. Welch stressed the importance of long term relationships, and how the port is prepared to grow with their customers.

“A large part of Charleston’s growth is attributable to our established steamship lines, who were not only active in promoting their existing services, but also expanded such services and added new services.” Some examples include NOL, NYK, COSCO, P&O, SeaLand, Maersk and Wallenius Lines. CSX improved its dedicated intermodal service by reducing its transit time between Charleston and Florida by a full day.

According to Welch, the quality business climate at Charleston has attracted several important newcomers:

- SafBank returns to Charleston, joining Mediterranean Shipping and Lykes Line on routes to South Africa and Australia.
- Med Shipping/Polish Ocean Lines began a new North Europe service with Charleston first-in and last-out. POL designated Charleston as its load center port for North Europe.
- Med Shipping initiated a new weekly service to the West Coast of South America.
- Commencing in October 1994, CCNI/CSAV/Lykes/Nedloyd will provide a weekly service to the West Coast of South America.

“South American trade at Charleston has responded to these improved services by increasing 20 percent in past eighteen months,” Welch said.

Port users all over the world have responded well to other continually improving port services. The ORION system, for example, has made its mark on the industry. “External auditors documented that the ORION system gives the Port of Charleston and its users a two-day time advantage over any other port. The reason it works so well is because it was developed with the help of each segment on the waterfront, not by outside consultants.”

“This past year was a good year for the Port of Charleston, and even stronger results are anticipated for 1994/95,” Welch forecasted. Some things to look for:

- Evergreen Line’s new R-class vessels will begin arriving at North Charleston Terminal in a few weeks.
- SeaLand Service, a long-time partner of the Port of Charleston, will be relocating from Columbus Street Terminal to a brand new area at Wando Terminal, shortly after the first of the year. SeaLand and Maersk, who share some services, will also benefit from being side by side at the Wando. There will be three giant new container cranes (100-foot gauge, post-panamax) ready to handle their cargo in early 1995.
- The City of Charleston will join the Port of Charleston in the master planning process of redeveloping approximately 60 acres of Union Pier Terminal. Five firms have been chosen out of a group of 120, and will submit detailed proposals for intensive review this fall.

“This is a new and exciting era for the Charleston waterfront,” the executive director, the man in the driver’s seat, concluded.

Helsinki Port Operation
On a Business Basis

On September 15 the Harbour Committee of Helsinki decided to put forward to the City Board that the Port of Helsinki, now a City Department, be converted into a business enterprise
subject to new regulations in the Act relating to municipalities, the reorganization to come into force in the beginning of the year 1995.

The Committee proposes that the name Helsingin Satama — Port of Helsinki — should henceforth be used in operations and marketing. It hopes that the City Council will approve of the change before the reading of next year's budget.

According to the proposition, budgetary grants will no longer be made towards the Port, but the Council will only determine a result objective. The Port will have greater freedom to decide on means to the end. As a result, the reform allows for a flexible decision-making and increases the space for economic action. Commercial bookkeeping will be introduced as a consequence of the business model.

In 1995, the receipts of the City from the Port will be an estimated 64.6 million marks in yields of the capital, amortization payments, and interest. Without the change this sum would be approximately the same. The Council can revise the result objective yearly.

The situation of the staff will not be affected by the adoption of the business model, because the Port will remain part of the City's organization. General municipal collective agreements will be observed also in the future. However, an increase in flexibility is hoped for in personnel administration.

Investment policies also will remain unaffected by the changes. Infrastructure, such as quays, fairways, and traffic arrangements, will remain the responsibility of the Port. Conforming to established practice the Harbour Committee will determine the Port rates.

The reform results in certain benefits for the clients of the Port. Result accounting according to the principles of business bookkeeping makes it easier to compare the Port to other ports, to other municipal services on a commercial basis, and even to enterprises. Because the Port will not be bound by grants, it will be able to react more flexibly to needs, including those of different interested parties.

(Info Port of Helsinki)

### Le Havre: Closer Ties With European Market

The agreements signed in Le Havre on July 8th, 1994 on port stevedoring and especially the agreement of labour reliability have already meant the recovery of all the shipping services of the biggest container port among French ports.

This return to confidence also concerns the partners of inland transport as Intercontainer-Interfrigo-ICF-, the largest rail operator in European combined transport, is now integrating the port of Le Havre into its European scheme of rail service.

Intercontainer-Interfrigo has just decided to re-establish the connection of Le Havre to its European combined transport network called Qualiynet as from September 25th, 1994, inst.

Owing to this connection, the Port of Le Havre will have the possibility to other daily connections to the following destinations:

- Switzerland (Basel, Zurich, Embrach, Niederglatt, Geneva)
- Italy (Milan, Oleggio, Bologna, Padua, etc.)
- Spain (Barcelona, Valencia, Madrid, Tarragona)
- Germany (Mannheim, Neuss, Eisenach, Sarrebruck)
- Portugal (Lisbon, Leixoes)

Le Havre can thus initiate a return to the European market without waiting any more with an offer of combined transport meeting the standards of quality demanded by its customers:

- 24 places served in Europe (and others on request).
- High-performance times of delivery (Day A/Day B or C according to the destinations).
- Guaranteed times of delivery to Switzerland (Basel-Le Havre) with late arrival charge, should any delay occur.
- Follow-up and information on the transport progress (prior notice to customs services, prior notice of arrival, information in case of incident,...).

This rail service which makes it possible to spread over all Western Europe in a maximum time of 24 to 36 hours according to the destinations emphasizes the shipping transit-time offered by Le Havre owing to its geographical location which actually makes that it is the first port of call on import and the last port of call on export.

Located in the heart of the North-Western European sea board, in the immediate vicinity of Great Britain, Ireland, the Iberian peninsula, Germany, Switzerland and the North of Italy, Le Havre is more and more considered as a privileged access gateway to the European market and a hub of international transit to these countries, owing to its central location.

### Address by Mr. Denis J. Murphy

On the Occasion of His Election as Chairman of Cork Harbour Commissioners, 17 October, 1994.

Fellow Commissioners,

I am deeply honoured to be elected Chairman of Cork Harbour Commissioners and I wish to formally thank my proposer and my seconder and all the members for the trust you have placed in me. I wish to record the Board's and my own appreciation of the commitment and application of my predecessor, Commissioner Cregan. During his term of office there have been many important milestones — the port handled 7 million tonnes of cargo for the first time in its history and we were successful in qualifying for E.U. Cohesion Fund grants for a number of projects which are critical to the successful development of this port. In addition to the success in securing funding for the Ringaskiddy Ferry Terminal and for dredging the approach channel to Tivoli, I know that Commissioner Cregan took particular pride in the Board's success in obtaining sanction for a new tractor tug. The Cobb Cruise Terminal was recently opened in considerable style and overall Commissioner Cregan can take great pride in the achievements of the port during his period of office. On a personal note, I wish to thank him for the courtesy and consideration he always showed me as Vice-Chairman over the past two years.

In October 1983 when I was previously elected Chairman of the Commissioners, I stated that unemployment was the most critical problem confronting the Cork region. I also sug-
Maiden Call of M.V. Mathilda to Cork

Gentlemen,

I am conscious of both the honor and the burden you have placed on me today and I ask for your support for me during the next year. I appeal to the members to leave behind any small divisions which may have existed in the past so that we can all unite in the common goal of advancing the Port of Cork. I look forward to working with Chief Executive Pat Keenan and his dedicated team and I undertake to perform the duties of Chairman in a committed and impartial fashion.

Pat Keenan, Chief Executive Port of Cork, makes a presentation to Captain Detlef Sturenburg of M.V. Mathilda on her maiden voyage to the port of Cork. Picture includes: Anthony Ronayne of Ronayne Shipping; Captain Pat Farnan, Cork Harbour Master; Sean Geary, Marketing Manager, Port of Cork; John Thornton of Continent Ireland Line (Owners Rep.), and Michael Coolkey, Operations Manager, Cork Maritime Ship's Agents.

Record Tonnage At Limerick Port

1993 was another successful year for the Harbour. A record level of 6.925 million tonnes of cargo was handled at the various facilities compared with the previous highest return in 1992 of 6.396 million tonnes, an increase of 8.3%.

This highest ever level of activity arose from an increase in shipments at all harbour facilities, but particularly at the Aughinish marine terminal.

Last year was the eleventh successive year in which a substantial increase in

Hudig and Kersten Continent Ireland Line, the well established and vastly experienced container operators between Ireland and the continent, introduced a new vessel the 448 T.E.U. m.v. Mathilda into their scheduled Antwerp/Rotterdam service on Monday 26 September, 1994. This positive development indicates the commitment of the line to the Irish trade and reinforces their determination to provide a premier lift-on lift-off service to and from Cork with the vessel committed to a weekly Monday a.m. arrival.

In welcoming the new service the Port of Cork's Chief Executive Mr. Pat Keenan said that this welcome development was further justification for the investment of £2 million made by the port earlier in the year to deepen the approach channel to the Tivoli Container Terminal. This investment brought to £6 million the total investment at the Terminal since 1991/2. The port is committed to further investment at Tivoli to ensure that the Tivoli Terminal will continue to have the fastest container turnaround time of any Irish port.

During the week preceding my previous election, negotiations commenced between the Cork Cargo Handling Regulatory Company and the I.T.G.W.U. (now S.I.P.T.U.) which led eventually to agreement on the first phase of a Docks Rationalisation Programme. This year there have been some tentative steps on the road to negotiating a third phase of Docks Rationalisation. While the port has made great strides in recent years through investing in modern facilities, in streamlining port services and in more focused marketing, we must recognise that we are now experiencing a period of unprecedented inter port competition. It is therefore my sincerest wish that rationalisation discussions will quickly reach fruition so that we can soon offer existing and potential customers more efficient and competitive cargo handling and thereby avail of any new business opportunities which may present themselves.
tonnage was recorded over the previous year. Since 1983 port traffic has increased by 300% or at an average annual growth rate of around 17%. From 1983 to 1993 cargo volumes increased from 1.74 million tonnes to the present level of almost 7 million tonnes.

During 1993 almost 25% of the total seaborne trade of the State (28.36 million tonne moved through the harbour), which maintained its position as the second largest in tonnage terms. The highest cargo tonnage was through Dublin at 7.008 million, around 1% greater than that of Limerick while Cork had the third highest throughput at 6.429 million or 7% less than Limerick.

The combined throughputs of all harbours in the Shannon Estuary including Limerick and Foynes at 8.112 million tonnes, was the highest of any harbour area in the State, exceeding that of Dublin Bay which includes Dublin and Dun Laoghaire by around 8%.

Cargo returns continued to be buoyant in the first half of 1994 when over 3.52 million tonnes were recorded, and over the twelve month period ended 30th June, the volume of goods shipped was 7.176 million tonnes. This is the first occasion in any twelve month period that a 7 million ton throughput has been exceeded and current indications are that it will be maintained to the end of the year.

Traffic increases were recorded at all harbour facilities with the exception of Shannon Airport Oil Jetty where there was a 20% decrease compared with the first half of 1993, which is a reflection of the loss of the Airport’s “stopover” status.

(Shannon Shipping News)

**Trade Records for Fremantle in 1993/94**

Fremantle Port Authority ended the 1993/94 financial year with record total port trade and container throughput. FPA Acting General Manager Alec Meyer said total trade through Fremantle Port reached a record 20.01 million mass tonnes — up 1.7 million mass tonnes or 9.4 per cent on the previous year.

“Container trade exceeded our expectations with 169,174 TEU handled — up 16 per cent on 1992/93,” Mr Meyer said.

“The growth in container trade is significant, given that over the past two years, the trade has grown by more than 10 per cent each year.

“The combined efforts of shippers, shipping lines and the port community to further develop trade and the high level of economic activity sustained across the various sectors of Western Australia’s economy have made this year our best on record.”

Livesheep exports totalled a record-breaking 4.4 million in 1993/94, which was 24 per cent higher than the previous year.

New motor vehicle imports also increased to a record 33,730 units, which was an 11.2 per cent increase on the previous year’s figure.

In 1994/95, the FPA will continue
to focus on port efficiency, constraining charges and improving its competitive position. (Fremantle Port News)

Fremantle: Pilotage Contract Working Well

The privatisation of the Fremantle Port Authority’s pilotage service has seen a 50 per cent increase in the daily availability hours of pilots.

On June 15, the privatisation of the FPA’s pilot service through an employee buyout occurred when the Port Functions Bill was proclaimed in the WA Parliament.

Pilotage was contracted out to a company formed by 10 of the FPA’s former pilots on a five year contract basis. The contract enables the FPA to re-tender the pilotage contract on a fully competitive basis in five years time.

The contract is part of the FPA’s move into commercialisation, which began more than two years ago. Contracting out and the introduction of competitive tendering by the FPA has increased the commercial focus and efficiency of the port.

Over this time, the FPA has looked at all areas to assess where service improvements to customers could be made, whether through competitive tendering, contracting out and benchmarking, based on international practice. The FPA has contracted out a number of functions and services, and competitively tendered for others. These include: stevedoring maintenance, forklift training, internal audit management, as well as insurance and risk management.

The establishment of enterprise based agreements has eliminated demarcation by allowing tenders to be called for all non-core maintenance work and some core maintenance work. (Fremantle Port News)

Kooragang 5 Berth Now Fully Operational

Port Waratah Coal Services’ (PWCS) Kooragang Coal Terminal second coal loading berth has commenced operation.

The 315m long berth known as Kooragang 5 (K5) is now on line and fully operational after a trial period, increasing Newcastle’s coal loading capacity by 7 million tonnes (mt) annually.

With a coal throughput capacity of 53 mt, PWCS now shares a similar capacity with the Richards Bay Terminal in South Africa as the largest coal export terminals in the world. PWCS General Manager, Mr Phillip Hughes said the company was pleased to announce the berth had been completed on time as part of a $150 million program of expansion. “PWCS has been working closely with the project contractors, Candac Thiess Joint Venture, to ensure the berth would be fully operational by September 1994,” Mr Hughes said.

“Our employees have worked tirelessly on the project during the past 12 months, and the results will only help to benefit the capacity and reputation of the Hunter Valley Coal Export Industry.”

In addition to the new berth, which can accommodate a 150,000 dwt Cape size vessel, the project has included an extension to the shiploading conveyor to feed the new and the original berths; and duplication of the stockyard reclaiming conveyor to allow simultaneous reclaiming to ship and stockyard recirculation.

The project is the first stage in a long term step-by-step program of expansion designed to increase coal throughput and maintain the position of the Hunter Valley Coal Export Industry as a reliable and competitive supplier to international markets.

The next stage of the expansion program, to extend the stockyard at the Kooragang Coal Terminal to increase storage capacity by 1mt, is under way and scheduled for completion in June 1995. (Scuttlebutt)

HK: New World Record In Container Throughput

Hong Kong has become the first port in the world ever to handle more than 900,000 containers in a single month in May 1994 when its throughput totalled 985,000 TEUs. This represents a 26.8% increase over the same month last year. The trend was maintained in June when 951,600 TEUs were handled. This dramatic jump has brought Hong Kong’s total throughput for the first six months of the year to a little over 5.1 million TEUs, a 22.6% increase over the same period in 1993 giving it the lead position in the world for the year so far.

Hong Kong was named the world’s busiest container port for 1993 having handled more than 9.2 million TEUs. Previous records show that Hong Kong’s throughput figures tend to grow at a greater rate in the later months of the year. It is therefore likely that Hong Kong will maintain its lead position amongst the world’s ports for the rest of 1994 even as it looks set to break the 10 million TEU barrier — a unique achievement.

Berths at CT8 Completed Ahead of Schedule: HK

In keeping with the Port Development Strategy of Hong Kong, construction of Container Terminal 8 (CT8) to provide 4 container berths was commenced in October 1991. All berths have now been completed and commissioned in advance of the original schedule. The last berth, Berth No. 4 was completed in September 1994 — 6 months ahead of schedule. The remaining development of CT8 e.g. back-up areas is now expected to be completed in May 1995, again some 7 months ahead of schedule.

Detailed design for Container Terminal 9 as the next step is now well progressed. The development strategy calls for further progressive development at Lantau Island. Accordingly, detailed design for Container Terminals 10 & 11 at Lantau Port is due to commence shortly. Requirement for Container Terminals 12, 13 and 14 has also been triggered in view of the projected demand with the preliminary planning work expected to start soon.

Hong Kong, as a main entrepot for southern China, has seen a phenomenal growth in its trade in recent years. Having anticipated this growth, the Port and Airport Development Strategy (PADS) intended to provide long-term solutions to cope with demands up to the year 2011 was drawn up by the government some years ago.
New Undersea Tunnel in Osaka Bay

By
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The construction of Osaka Nanko Tunnel (ONT), as part of a new 2,200-meter access route between Osaka South Port (Nanko) and downtown Osaka, began in 1989. An immersed, below-seabed tunnel will cover 1,025 m of the route crossing the central navigational route of Osaka Port. When completed, it will be Japan's first dual-purpose immersed tunnel for automobiles and trains.

The tunnel will stretch from Osaka Port Station at the end of the Subway Chuo Line with a 4% grade approach. The central section of the tunnel will have a 0.2% grade for drainage. At the Nanko side, the tunnel will be connected, via a 3.4% grade approach, to a terminal station that will be constructed on reclaimed land. Roadways will have the same slope as the railways inside the immersed tunnel and a 5% grade along the approaches.

In a cross-section view of the immersed tunnel, subway tracks will be arranged in the middle, sandwiched by a two-lane roadway on either side, with an evacuation pathway running alongside. The tunnel will be 35.2 m in total width, including 1.2 m thick outer walls. The height of the tunnel elements will be fixed at 8.5 m, in consideration of the passage of tall container vehicles and based on the thickness of the concrete roadbed and outer walls.

A depth of 13 m must be secured along the central navigational route of Osaka Port to allow for maximum 400 m wide, 45,000 D/W ships. For this reason, the top of the tunnel must be at least 1.5 m below the seabed and covered with protective stones.

Two portal towers will be constructed, one at the edge of the Central Pier in Minato-ku and the other on a newly reclaimed embankment on the Nanko side. The portal towers, 1,025 m apart, will be linked via 10 immersed tunnel elements and 1 wedge-shaped final coupler block. Tunnel Elements No.7 will be partially widened to 38.5 m to accommodate emergency lanes. Tunnel Elements No.9 and No.10 will be curved along the shape of the roadway surface.

The standard immersed-tube tunnel element, 35.2 m wide, 8.5 m high and about 103 m long, is covered with shell steel plates of 12 mm maximum thickness. For the side wall and bottom slab of the tunnel element, shell steel plates are viewed as tensile structural members; steel plates are welded with stud connectors and stirrups for integration with the concrete. Plate interior is of ordinary RC structure with reinforcing bars D38 mm in maximum diameter. This is called a semi-composite structure. The top slab is of an ordinary RC structure for reasons of construction, with waterproof steel plates and protective concrete applied to the exterior. Shell steel plates are connected overall to ensure water-tightness.

Immersed-tube tunnel elements are fabricated, 3 elements at a time, in the dry dock of a shipbuilding company 15 km from Osaka Port in Sakai-SEN-boku Port, and towed to Osaka Port following the necessary fitting-out. The tunnel elements are sunk by pouring seawater into two temporary ballast tanks (1,000 tf x 2) installed inside each element. Submergence is accurately implemented with 2 pontoons and 10 winches mounted on 2 towers attached to the tunnel elements. When a key is inserted into the bracket of an installed tunnel element, it is drawn into place by two 200-tf jacks.

Trench dredging is required prior to the installation of immersed-tube tunnel elements. Clay below the seabed amounting to 72 m³ was dredged with pump boats to a maximum depth of 27 m, a base width of 41.2 m and a slope gradient of 1:2, Macadam, 1.0 m in thickness, is evenly laid on the base, on which tunnel elements are installed. The height of the tunnel elements is adjusted with two 500-tf jacks, and waterproof concrete is placed from inside the tunnel elements in the space between the tunnel elements and the base.

Flexible joints are employed between the portal towers and the tunnel elements and between the tunnel elements for two reasons: to absorb the excessive force generated in earthquakes while realizing an economical design, and to cope with uneven settlement caused by ground subsidence.

Although no major earthquake has occurred in recent years in the vicinity, the possibility of earthquakes always exists, judging from past data. Therefore, tunnel element profile force and connector elasticity were calculated by seismic response analysis, assuming the occurrence of an inland earthquake equivalent to the Kyoyo Bunroku Earthquake in 1596, whose maximum acceleration was 290 gal, and an ocean earthquake equivalent to the Nankai Earthquake, with the seismic center 58 km offshore and maximum acceleration 232 gal.

The ventilation tower on the Nanko side will be installed on a firm gravel layer at a depth of 33 m; however, subsidence is anticipated due to recent land reclamation in the surrounding area and the resultant consolidation.
The tunnel elements are fabricated to prevent deterioration in the cut-off performance of the rubber gasket, which is made of 16 mm laminated rubber in the shape of Q. The connecting cables, 72 PC cables 75.5 mm in diameter, counter the tensile force applied in the axial direction of the tunnel element, and are linked with couplers. Horizontal and vertical shear keys counter the shear force applied perpendicularly to the tunnel element axis, and are fabricated using concrete or steel plates and rubber supports following the installation of the tunnel elements.

Conventionally, the cut-off panel and dry-up methods have been used for final couplers for submerged tunnel elements. In the ONT project, a completely new type of final coupler block is used.

The tunnel elements are sunk one by one from the Minato-ku side while navigation is regulated. After the tunnel elements are joined up to Tunnel Elements No.8, Tunnel Element No.10 is joined to the ventilation tower on the Nanko side, and Tunnel Element No.9 is joined to No.8. Finally, a wedge-shaped final coupler block is inserted between No.9 and No.10 joining all the tunnel elements.

The wedge-shaped final coupler block is trapezoidal in shape, 10.0 m long on the upper side and 3.6 m long on the lower side (longer upper side). Flexible joints are installed in its central section beforehand. The edges of Tunnel Elements No.9 and No.10, facing each other, form 20-degree grades, around which the rubber gaskets are installed. The wedge-shaped block is lowered as it slides down along the surface of the rubber gaskets. It also features the capacity to retain watertightness against earthquakes or subsidence after completion.

The secondary cut-off rubber is installed to prevent deterioration in the cut-off performance of the rubber gasket. It is made of 16 mm laminated rubber in the shape of Q. The connecting cables, 72 PC cables 75.5 mm in diameter, counter the tensile force applied in the axial direction of the tunnel element, and are linked with couplers. Horizontal and vertical shear keys counter the shear force applied perpendicularly to the tunnel element axis, and are fabricated using concrete or steel plates and rubber supports following the installation of the tunnel elements.

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The tunnel elements are sunk one by one from the Minato-ku side while navigation is regulated. After the tunnel elements are joined up to Tunnel Elements No.8, Tunnel Element No.10 is joined to the ventilation tower on the Nanko side, and Tunnel Element No.9 is joined to No.8. Finally, a wedge-shaped final coupler block is inserted between No.9 and No.10 joining all the tunnel elements.

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the installation position of No.9 and No.10, accuracy to within ±15 mm is required to achieve the prescribed hollow structure throughout the tunnel elements. The sloped joining surfaces are firmly connected by concrete placement on the site.

Osaka Nanko Tunnel Approaches

1. Minato-ku side

The Minato-ku side approach is mostly built in the Central Pier area. Because of previous damage due to an earthquake, the Central Pier has a shelf-board structure, which may be regarded as artificial ground. A 50 cm thick concrete plate 10m below ground, the shelf board, is supported by timer piles 25-30 cm in diameter. Since the shelf board and timber piles were expected to greatly obstruct the earth retaining work, they were removed by an all-angle rotary all-casing excavator 2m in diameter and replaced by granite soil. Steel pipe sheet piles, 1 meter in diameter and 50 cm in length, were then driven by the inner excavation press-fitting technique.

2. Nanko side

The Nanko side approach is characterized by the fact that it mostly covers newly reclaimed land. Specifically, 3-year-long construction work on a new embankment was completed in 1990, and a seabed area of about 67 ha from DL - 12 m to DL + 5 m was reclaimed from 1990 to 1992.

The newly reclaimed layer poses no settlement problem since quality earth is used. However, since a heavy load is being newly applied below the original seabed, major subsidence is expected to occur in the alluvial and diluvial layers, calling for anti-subside measures that are also advantageous in work efficiency and economy. Therefore, from the part nearest the portal towers, the Deep Mixing Method, Sand Compaction Pile and Sand Drain Methods have been adopted to counter subsidence in the alluvial layer. Since subsidence in the diluvial layer is expected to affect this section, attention was focused on Ma 12 stratum, which accounts for about 40% of subsidence in the diluvial layer. A mezzanine was established in the upper part of the tunnel to reduce load and control subsidence.

As of August 1994, the foundation work on the two portal towers and the installation of Tunnel No.1 to No.5 have been completed. Construction is being implemented toward scheduled operation of the roadways and subway by the end of 1997.

Professor Emeritus Yoshihi Nagao of Kyoto University has provided comprehensive guidance in the design and construction of the ONT project. Moreover, as well, guidance and useful advice have been provided by Prof. Tohru Shibata of Kyoto University in regard to subsidence analysis, Prof. Keichiro Sonoda of Osaka City University in regard to structural analysis, and many others. We hereby acknowledge our indebtedness to these individuals.

S'pore Univ., Port to Collaborate on R&D

The National University of Singapore (NUS) and the Port of Singapore Authority (PSA) will sign a Memorandum of Understanding (MOU) on Research and Development (R&D) collaboration on 22 July 94.

This is the first memorandum between NUS and PSA on R&D co-operation. It will be signed by Professor Goh Thong Ngee, Dean, Faculty of Engineering, NUS and Mr Philip Ng, Director (Engineering), PSA. It formalises a long-standing association between NUS and PSA and paves the way towards an even closer co-operative effort on R&D.

Under the two-year MOU, NUS and PSA will jointly explore possible areas of mutual interest for R&D collaboration and promote such activities. These will include areas in engineering, science, information technology, architecture and building. The MOU will be renewed automatically for successive periods of two years upon expiry.

NUS and PSA have collaborated on other projects previously. One of the first major projects was on the reclamation of the Singapore Changi Airport by PSA in 1975. NUS and PSA had jointly conducted a detailed study on reclamation and soil improvement methods. Since then, the two organisations have worked on numerous joint projects in areas like in engineering and transportation aspects, as well as the development of information technology systems. Currently, there are also on-going joint projects between NUS and PSA.

The MOU serves to provide the formal framework for collaboration. A management committee will also be formed under the MOU to ensure that the joint efforts between NUS and PSA will be more co-ordinated, consistent and productive.

Both NUS and PSA will reap many benefits from the collaboration. PSA, a multi-disciplinary organisation, provides a wide range of potential R&D projects in the areas of port construction, equipment, port and information technologies. NUS, on the other hand, with its academic resources, serves as the catalyst for the success of these programmes through its research capabilities.

The sharing of expertise and knowledge studies between NUS and PSA will lead the way for resourceful and innovative breakthroughs in PSA's port operations and management, which will help strengthen Singapore's premier global port status in the 21st Century and further boost Singapore as a R&D centre.

R&D projects Between NUS and PSA

Since the 70s, NUS and PSA have collaborated on a number of projects. These include projects like studies on pile load capacity (1977), tidal motion and sedimentation in Singapore waters (1986-89) and corrosion and protection of concrete port structure (1987-90), as well as the development of an oil spill computer model which tracks oil spills (1990-91). Projects which are completed more recently includes the Container Number Recognition System, which captures and matches the identification number of containers in the Port and at its gates, against PSA's computer records. This system enhances the security in the Port and enables real-time tracking of the movement of containers. Presently, there are about five on-going R&D projects between NUS and PSA.

Below are more detailed examples of some of the joint projects:

Competed Project

Eg.1 Study on the Caisson Foundation which is used in the construction of the Port.

In Singapore, caissons were first used as earth retaining structures in the
construction of the Sentosa causeway. One of the advantages of this method is that it involves no piling. This reduces the noise and dust levels in construction. Caissons, which are huge pre-fabricated concrete structures weighing 5,500 tonnes each, will be used for the first time in Singapore for wharf construction at PSA's new container terminal at Pasir Panjang.

The R&D study simulates the actual stress imposed by the caisson on the ground under different construction and load sequence by means of a special centrifuge, in which a scaled-down model of a caisson was tested.

**On-going Project**

**Eg.2 Study on the use of dredged materials for the reclamation of Phase II or PSA's new container terminal at Pasir Panjang**

Currently, NUS and PSA are carrying out laboratory and centrifuge studies to investigate the feasibility of using dredged materials for reclamation. If the study is successful, a field study will be undertaken. Using dredged materials would provide the necessary materials in resource-scarce Singapore.

Though this method is widely practiced in Japan, it is necessary to evaluate its suitability for use at the Port, given the differences in soil type and the different operating environment, such as the heavy stacking of 8-9 containers in the Port. The study will also evaluate and recommend soil improvement methods, how time-saving the process will be, the cost-effectiveness of using dredged materials and the best methods of reclamation with respect to the cost, performance and construction practicability.

**Potential Projects**

**Eg.3 Development of an Automated High Density Container Storage System**

This is one of the potential projects which NUS and PSA apply in the later phases of the new container terminal at Pasir Panjang. It reflects the future direction for port operations.

Presently, the various points of container handling from the wharf to the yard requires manpower. This proposed system would allow the Port to manage its operations in the face of labour shortage and through intensive stacking of containers in land-scarce Singapore.

The concept is to develop a system where the man-less cranes will load the container straight into an automated container warehouse. In the latter, containers are automatically loaded into storage cells and then shuffled according to their unloading schedules. The automated warehouse will manage the logistics and inventory of containers.

The R&D studies will include the design and building of such a warehouse which maximises space, as well as develop intelligence systems needed for its operations. It will be a project which involves multiple disciplines such as civil, mechanical and electrical engineering, industrial systems, decision science and computer science.

**Vietnam SeaPorts Association Established**

The Office of Prime Minister of Vietnam has approved the establishment of the Vietnam SeaPorts Association (VPA), an association under the Law and regulations of the Socialist Republic of Vietnam. All seaports in Vietnam are entitled to be members of the Association by fulfilling the application for membership.

The preparatory works have been completed and approved by the Congress of Association — convened on 15 August 1994 in Ho Chi Minh City — including the following:

- The Charter of Association
- The Logo of the Association
- Initial regular members (23)
- The Executive Committee (9)

In a separate meeting, the Executive Committee of VPA has elected the following officials to represent the Association:

**Eg.4 Development of an Intelligent Remote Container Handling System for Quay Cranes**

The Port's operations are labour-intensive. For example, each quay crane is manually operated. As the Port moves into the 21st Century, one of the ways which it intends to overcome such labour-intensive operations is to automate and control container handling remotely from a control centre. A possible study will be the development of an intelligent container-handling system using images captured by various cameras mounted on the crane. The images are relayed to the control room, processed and integrated with an intelligent control system which controls the moves of the crane.
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