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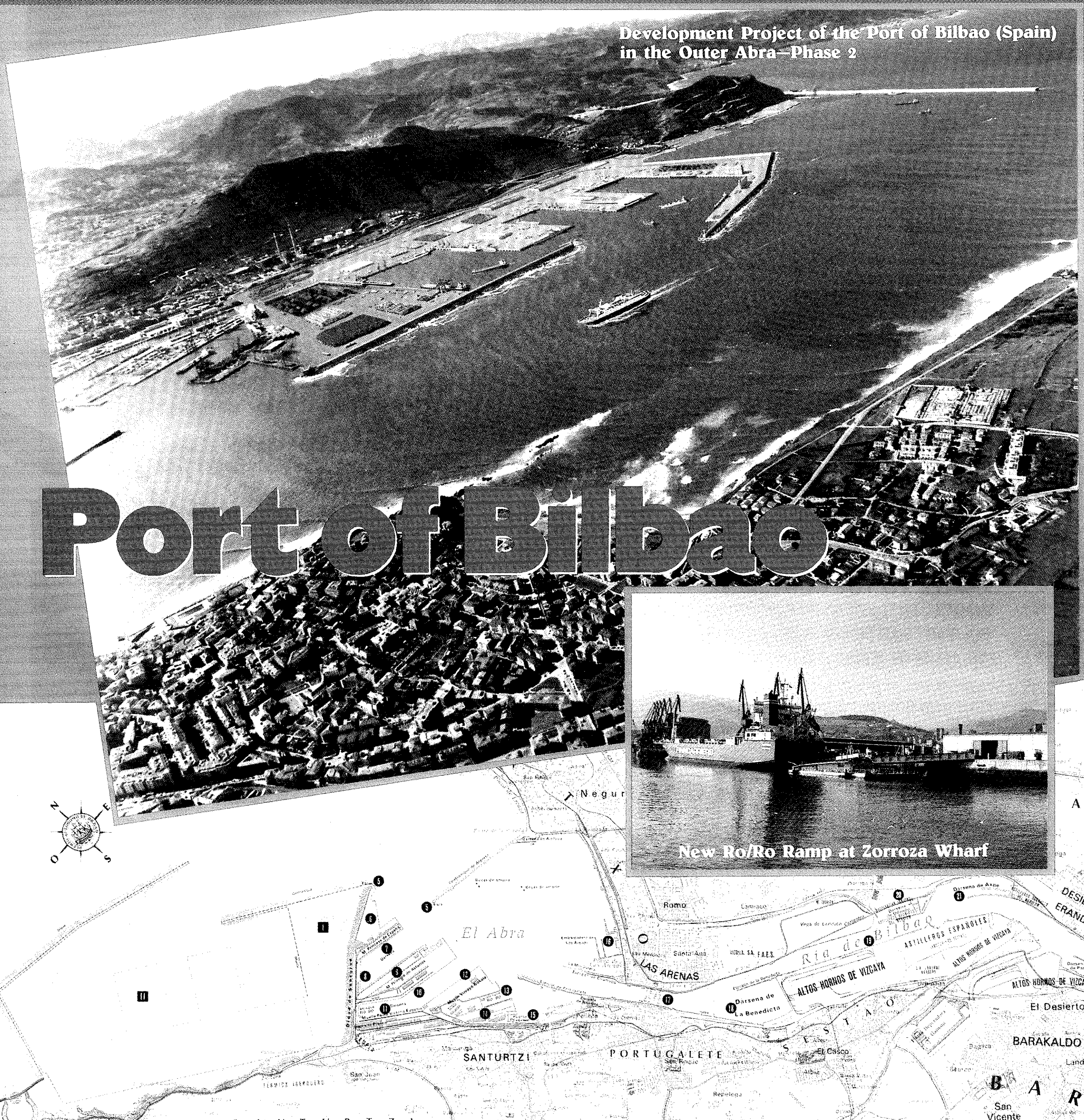
IAPH 17-23 APRIL 1993 SYDNEY

Ports & Harbors

The Publisher
The International Association of Ports and Harbors

November 1992 Vol.37 No. 9

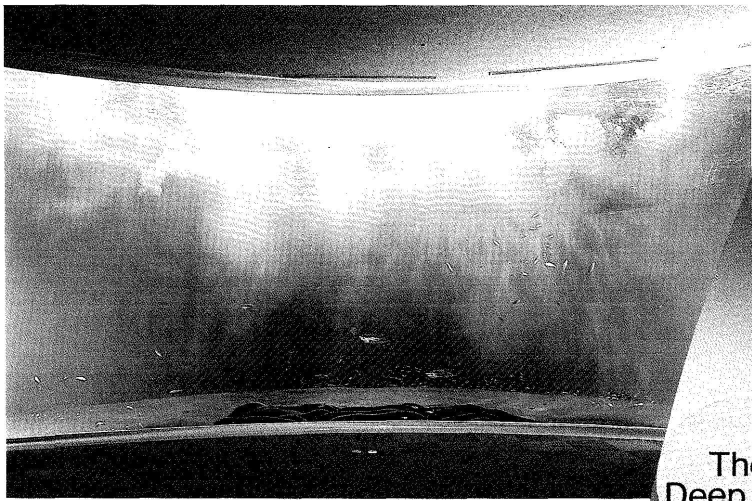


Development Project of the Port of Bilbao (Spain) in the Outer Abra—Phase 2

New Ro/Ro Ramp at Zorroza Wharf

The exhibit theme is "A Journey to the Antarctic".

PORT OF NAGOYA PUBLIC AQUARIUM



Marine Life Around Japan

MAGNIFICENT SCHOOLS OF MIGRATORY FISH SWIM ABOUT THE KUROSHIO (BLACK CURRENT)

Japan is dependent on the ocean for its survival. The Kuroshio passes along the east coast of Japan bringing with it a variety of fish. Experience the flow of the Kuroshio from an observation hall that gives you the feeling you are underwater.

The Deep Sea

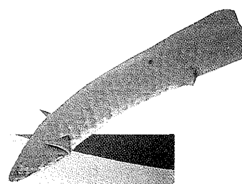
EXPLORE THE UNKNOWN WORLD OF THE DEEP SEA

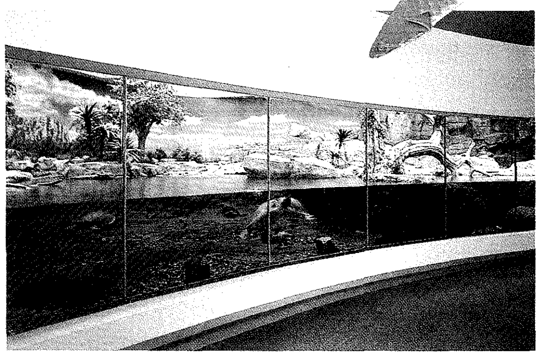
The deep sea is still virtually unknown to us today. What kind of living creatures exist in this dark world? Please come and explore the mysteries of the deep sea.

Tropical Marine Life

BREATHING CORAL REEF WATERS - TROPICAL MARINE LIFE

Carbon dioxide exhaled by creatures on land is taken in by coral, allowing it to grow. This is how the balance needed to sustain life is maintained between the ocean and the atmosphere. Listen to the sound of the waves while watching colorful tropical fish dance about the sparkling coral reef waters.

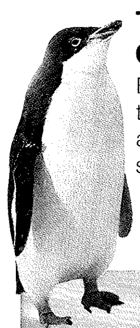


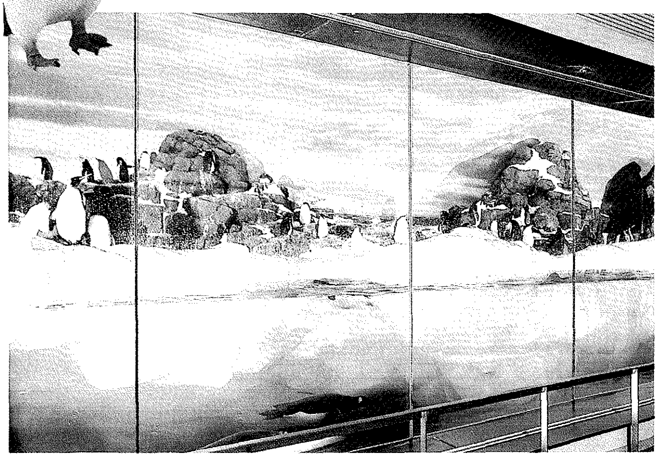


Australia

TRAVEL TO THE CONTINENT WHICH HOLDS THE SECRETS TO THE HISTORY AND BIRTH OF OUR PLANET - AUSTRALIA

Explore the evolution of all living things by observing freshwater fish and turtles from Australia, where many secrets to our past can be found.





The Antarctic

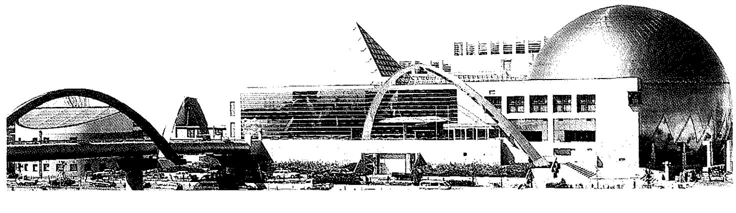
THE FASCINATING ANTARCTIC

The Antarctic holds dreams and romance for many people. Experience the charm of the Antarctic by seeing creatures that live in this harsh environment and endure the polar winters.

PORT OF NAGOYA PUBLIC AQUARIUM

1-3, Minato-machi, Minato-ku,
Nagoya 455 Japan

Phone 052-654-7000, Fax 052-654-7001, Telex 4463816 NPA J



Ports & Harbors
November, 1992
Vol. 37
No. 9

Ports & Harbors

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The International Association of Ports and Harbors
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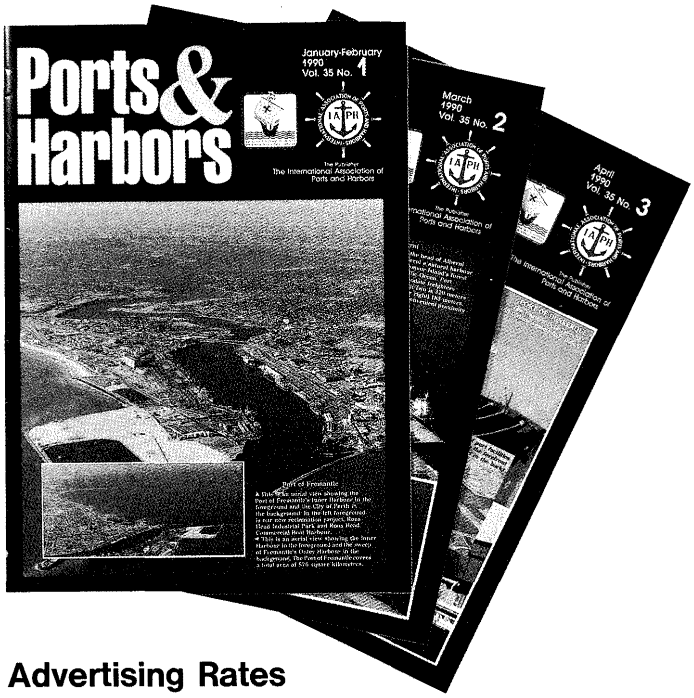
Telex: 2222516 IAPH J
Fax: 03-3580-0364

Contents

AN ADVERTISING OPPORTUNITY TO TALK TO THE WORLD'S PORTS

"Ports and Harbors"

The official journal of IAPH, "Ports & Harbors" provides a forum for ports to exchange ideas, opinions and information. Published ten times a year as a magazine by ports, about ports and for ports, "Ports & Harbors" includes inside reports before they become news to the rest of the world. This insiders' magazine is indispensable for port officials who make decisions that affect their industry. If your business requires you to talk to the people building and guiding activity at today's ports, you should be advertising in this journal.



General Information

Format:
Trim size 296mm × 210mm, normally 52 pages

Language:
English

Closing Dates:

Order Closing:
One month preceding publication date (January 20 for the March Issue)

Material Closing:
3 weeks preceding publication date (January 31 for the March Issue)

Agency Commission:
15% to accredited advertising agency

Advertising Material:
Black & White - Positive film right reading emulsion side down; full color films same as black & white; progressive proofs to be supplied. Screen: B/W 133; color 133. Camera ready layout or repro proof accepted; film production costs to be borne by advertiser.

All advertising materials to be sent to:

The International Association of Ports and Harbors (IAPH)
Kotohira-Kaikan Building, 2-8, Toranomon 1-chome, Minato-ku, Tokyo 105, Japan
Tel: (03) 3591-4261 Fax: (03) 3580-0364

Advertising Rates

Effective January 1992

Black & White Rates (In Japanese Yen)

	One time	Three times	Six times	Ten times
Full page	100,000	97,000	95,000	90,000
1/2 page	60,000	58,200	57,000	54,000
1/3 page*	35,000	33,900	33,200	31,500
1/4 page	27,000	26,200	25,700	24,300
Cover 2	143,000	138,700	135,800	128,700
Cover 3	117,000	113,500	111,200	105,300

*1/3 page accepted only in WORLD PORT NEWS Section.

Full Color Rates for Covers

Cover 2	263,000	255,100	249,800	236,700
Cover 3	237,000	229,800	225,200	213,300
Cover 4	270,000	261,900	256,500	243,000

Color Charges:
¥40,000 per standard color per page. Four Colors: ¥120,000 additional.

Special Position:
10% surcharge.

Bleed:
20% surcharge.

IAPH Membership Discount:
10% discount of total insertion costs to IAPH Members.

Mechanical Data

Trim size	296 × 210mm
Full page	250 × 175mm
Half page	120 × 175mm(H) or 250 × 84mm(V)
1/3 page	88 × 175mm(H) or 244 × 56mm(V)
1/4 page	60 × 175mm(H) or 120 × 84mm(V)
Bleed size:	302 × 215mm

IAPH ANNOUNCEMENTS AND NEWS

Happy Birthday to IAPH

IAPH Marks 37th Anniv. On Nov. 7

On November 7, 1992 we commemorate the 37th anniversary of the foundation of IAPH. Our organization officially came into existence at a meeting held at the Hollywood Roosevelt Hotel, California in November 1955. This was only 10 years after the official establishment of the United Nations following the end of World War II.

The establishment of our Association was the result of several years of preparatory work by a group of Japanese pioneers. The idea of forming an association of world ports was first mooted by the late Mr. Gaku Matsumoto (the then President of the Japan Ports and Harbors Association) who, along with the late Dr. Chujiro Haraguchi (the then Mayor of Kobe) and Mr. Toru Akiyama (the then Vice-President of the JPHA), played a central role in the formation of IAPH and guided the Association in its early years.

Now, almost four decades on, IAPH has almost 400 members (228 Regular, 108 Associate, 27 Honorary, 5 Founder and 7 Lifetime Members, and 11 Temporary Members) from 84 maritime countries. Our Executive Committee, comprising 24 members representing the three regions (Africa/Europe, Americas and Asia), is the chief executive body, whose mission is to implement the Board's policy and to generally direct all the Association's activities.

Head Office in Tokyo carries out the work of IAPH, working closely with the President, Vice-Presidents, the Executive Committee and the Chairmen of the various committees and the Liaison Officers, as well as with our European representative office in London.

The past 37 years have seen momentous changes and developments in the international political and economic scene, with far-reaching effects on human organizations throughout the world, port communities included.

IAPH Conferences, starting with the inaugural conference in 1955 in California, have been held at various hotels and conference halls throughout the world and even on a cruise ship, as was the case in the last Conference in Spain. In six months' time, IAPH members will gather in Sydney for the 18th World Ports Conference which is scheduled for 17-23 April 1993.

The Sydney Conference will enable IAPH to complete the restructuring of the Technical Committees in accordance with the guidelines approved by Exco which met in Charleston, South Carolina, USA in May this year. In a blueprint for restructuring the major IAPH functions, three areas of responsibility are identified as paramount in our organization's activities: **Trade, Ports,** and **International Affairs and Communications.** The work of all the existing committees and sub-committees as well as that of the representation activities will come under one of these three groups, and will be directed by each of the three regional Vice-Presidents of IAPH in the respective work areas.

The IAPH global family, starting with those charter members from only 14 countries at the inaugural conference 37 years ago, has now grown to encompass a membership from over 80 countries, although IAPH members have placed more importance on which ports or cities their friends represented than on which countries they came from. If any IAPH member looks at a recent edition of the Membership Directory, he or she will be pleased to find many familiar names listed in it with whom communication and the exchange of information is now a simple matter.

The Head Office staff in Tokyo, especially the senior members like R. Kondoh and K. Takeda who have been working here for nearly two decades, are often deeply moved when they look back at the time they had to wait for two weeks until they could receive responses from the members to the various letters the Secretariat sent. Today, by contrast, they take pleasure in seeing their fax machine print out a response from an African port to the question they made by fax a few minutes previously.

All the staff members, headed by Secretary General Kusaka, are working as a team to sustain the development of this unique organization, which will continue its endeavours for the benefit of all ports and harbors throughout the world.

(By Kimiko Takeda)

Sydney Conference Brochure Sent To IAPH Members, Registration Begins

The Organizing Committee for the 18th World Ports Conference of IAPH has recently completed a 18-page brochure outlining the details of the Sydney Conference and has circulated copies to all IAPH members and parties concerned.

The brochure contains a registration form, an invitation message from Mr. Max Moore-Wilton, Director General of Transport, NSW and Member of the Maritime Services Board of NSW, who acts as Chairman of the Conference, detailed information on registration, accommodation, programs for both business and social functions, and on exhibitions and the travel involved during and after the Conference week.

While the Conference brochure will reach the respective members of IAPH, we reproduce here Mr. Moore-Wilton's invitation message, the business programme and some other information from the Sydney Conference brochure.

Invitation to Conference

As Conference Vice President of the International Association of Ports and Harbors (IAPH), and on behalf of the Maritime Services Board of New South Wales as host organisation, I have the honour and pleasure of inviting all IAPH members to attend the 18th World Ports Conference in Sydney, Australia from 17-23 April 1993.

The Organising Committee aims to bring you papers during the working sessions that are relevant not only in today's terms but which also give a look into the future. For this conference we have focussed on using the vast skills and knowledge of our Technical Committees including the combined wisdom of IAPH officers to provide participants with the best technical papers from around the world.

To complement the technical aspects of the Conference the Organising Committee has developed a social programme to ensure delegates and their partners will see and experience the delights that only Sydney can offer.

I am convinced we can guarantee all participants in the 18th World Ports Conference a very high standard of technical papers with a relaxing yet full social programme which will combine to make a most memorable and enjoyable Conference.

Max Moore-Wilton

Max Moore-Wilton
Conference Vice President

Business Programme

Saturday 17 April

0900-1200	Committee Meetings
1400-1700	Committee Meetings

Sunday 18 April

0900-1200	Committee Meetings
1300-1500	Pre-Conference Joint Meeting of Board/Exco
Evening	OPENING CEREMONY

Monday 19 April

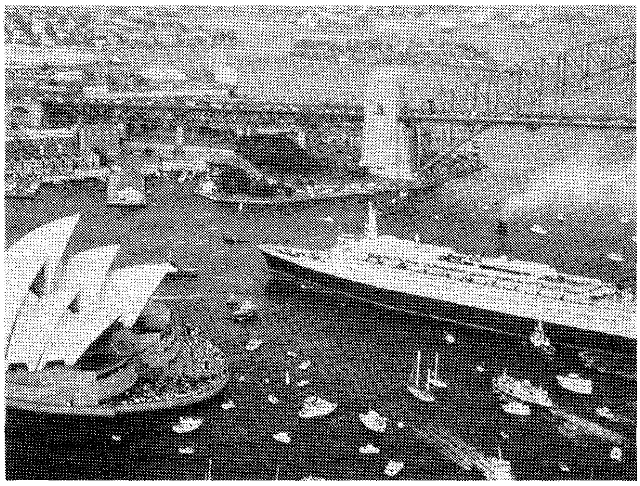
0900-1000	KEYNOTE ADDRESS "PORTS – THE IMPACT OF GLOBAL ECONOMIC CHANGE"
1030-1200	FIRST PLENARY SESSION
1400-1700	Working Session No. 1 PORTS AND WORLD TRADE "Trends in Regionalisation of Trade" – Europe/The Baltic Region – Americas – Pacific Rim Countries – African Continent "The Consequence of the Changing World on Maritime Trade and its Effects on Ports" "Port Promotion in the Shifting Winds of Trade"

Tuesday 20 April

0900-1200	Working Session No. 2 PORTS IN THE 90s – MANAGEMENT AND FINANCING "Trends in Privatisation or Corporatisation" – United Kingdom – United States – Developing Countries (Malaysia) – Australia/New Zealand
1400-1700	Working Session No. 3 PORTS AND TRADE FACILITATION "Trade Facilitation" "Prevention of Illegal Drug Traffic – How can Ports Assist" "Trends in Corporate and Directors Personal Liabilities"

Wednesday 21 April

Full Day	Technical visit to the Port of Newcastle and visit Kooragang Island for an inspection of the Kooragang Coal Terminal.



Thursday 22 April

0900-1200	Working Session No. 4 BULK LOADING PORTS – THE AUSTRALIAN SCENE "Bulk Loading Coal Ports" (Two papers) "Bulk Loading Iron Ore Ports" (Two papers)
1400-1700	Working Session No. 5 PORTS AND THE ENVIRONMENT "Environment and Port Development in a Changing World (Two papers) "Legal Aspects of the Environment and the Rapid Trend in Global Legislation" "The impact of Environmental Concerns on Dredging in Ports"

Friday 23 April

0900-1200	Working Session No. 6 PORTS AND HUMAN RESOURCES "Human Resource Development to meet the Impact of Global Economic Change" "The Problems involved in the Development and Management of Small Ports"
1400-1600	SECOND PLENARY SESSION and CLOSING CEREMONY
1600-1730	Post-Conference Joint Meeting of Board/Exco
1730-1800	Post-Conference Meeting of Exco

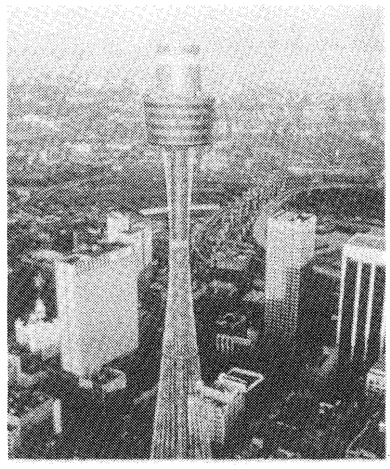
For registration or for further information, please contact:

The Conference Secretariat
IAPH 18th Conference
GPO Box 2609
Sydney NSW 2001, Australia
Tel: (61 2) 241 1478
(61 2) 247 6940
Fax: (61 2) 251 3552

TRADE EXHIBITION

A Trade Exhibition will run in conjunction with the Conference and will be situated on Level 9 of the Sydney Hilton Hotel. The exhibition will be an integral part of the Conference and to ensure maximum exposure for the exhibitors, morning and afternoon teas and lunches will be served in the exhibition area.

Conference Venue



The Conference will be held from 17 - 23 April 1993 at the Sydney Hilton Hotel situated in the heart of the city. The hotel has 585 rooms and suites with superb views over the city panorama. Located in the centre of the retail shopping hub, theatres and cinemas, the Hilton is also on the monorail link to Darling Harbour, one of Australia's most imaginative urban redevelopment projects with shops, restaurants and visitor attractions.

Registration

If you wish to attend the Conference, fill in the Registration Form and return it to the Secretariat in the envelope provided. Each delegate must fill in a separate form (photocopy for additional forms). Please read this booklet carefully before you complete your form.

Registration Fee

All fees quoted are in Australian dollars (A$)

	Fees received by 28 February 1993	Fees received after 28 February 1993
IAPH Members	A$1,350	A$1,500
Non IAPH Members	A$2,025	A$2,450

Honorary IAPH Members are exempted from payment of the registration fee. The fee entitles both the registered delegate and a companion to participate in all events, both technical and social and to receive one set of documents.

Payment of Fees

Payment of fees must accompany all registration forms. No reservations will be confirmed until payment is received. Payment can be made either by:

- *Bank draft in Australian Dollars*
- *Personal cheque (Australian Registrants only)*

Cheques should be made payable to "MSB/IAPH World Ports Conference".
Please *do not* pay your fees by direct bank transfer.

Cancellations and Refunds

Cancellations should be notified in writing to the Secretariat. Cancellations received prior to 30 March 1993 will receive a full refund less A$50.00 cancellation fee. Refunds for cancellations received after 30 March 1993 will only be made in exceptional circumstances.

Acknowledgement

Your registration will be acknowledged in writing with confirmation of your requirements according to your registration form.

The Conference Secretariat address is: IAPH 18th Conference
GPO Box 2609
Sydney NSW 2001
Australia
Telephone: (61 2) 241 1478
(61 2) 247 6940
Facsimile: (61 2) 251 3552

Registration and Information Desk

The Registration Desk will be located on level 8 of the Sydney Hilton Hotel. We advise you to call at the desk as soon as possible after your arrival in Sydney. The Registration and Information desks will be open during the following hours.

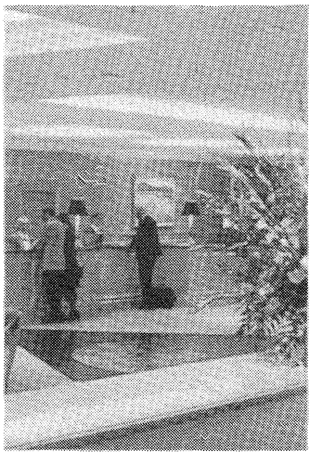
Friday 16 April	1400 – 1700	Sunday 18 April	0800 – 1700
Saturday 17 April	0900 – 1800	Monday 19 – Friday 23 April	0800 – 1800

The staff at the Registration and Information Desks will be happy to assist you in any way they can.

Arriving in Sydney – Meet and Greet

An information desk for attendants at the Conference will be located in the Arrivals Hall at Sydney Airport. A shuttle bus service will operate, free of charge, between the airport and the Sydney Hilton Hotel.

Accommodation



Accommodation and Rates

Accommodation held by the Secretariat has been secured at advantageous rates for Conference delegates. Only bookings made through the Secretariat will secure these rates. These rates will also apply if you choose to extend your stay.

Hotel		Tariff
		Per room per night
*****	Sydney Hilton Hotel (Conference Hotel)	A$165.00
****	Hyde Park Plaza	A$135.00
***	Park Regis Hotel	A$95.00
****	Waldorf Apartments	
	2 Bedrooms	A$165.00
	1 Bedroom	A$145.00

The above rates are for room only and apply regardless of single or twin occupancy. Suites are available on request from the Secretariat.

All alternative accommodation is within 5 – 10 minutes walk of the conference venue, the Sydney Hilton Hotel.

Check in time for Sydney Hotels is *2.00 pm.* Check out time is *11.00 am.*

Pre Registration

Some international flights arrive in Sydney in the very early morning. Because check-out time is 11.00 am it is possible that your room may not be ready for immediate occupation on your arrival. Whilst hotels will do everything possible to accommodate early arrivals, if you wish to be guaranteed immediate occupation you can ensure availability by paying an extra day's tariff for the night before you are due to arrive. Please advise the Secretariat if you wish to pre register.

Deposits

A deposit must be paid to confirm your reservation. The amount is indicated on the registration form. This deposit will be forwarded to your hotel and the amount deducted from your account when you check out. No deposits will be refunded for cancellations received after 30 March 1993.

Late Arrivals

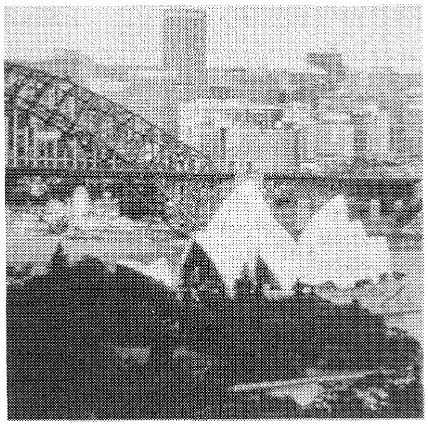
Please indicate if you will arrive at your hotel after 6.00pm; failure to do so might mean that your room will be released.

Change of Booking

Any change to a reservation must be notified to the Secretariat and *NOT* directly to the hotel.

General Information

Sydney – Host City



Sydney, Australia's gateway city and the capital of New South Wales, is built around one of the largest, most interesting harbours in the world and along miles of golden surfing beaches which stretch north and south of the city on the shores of the Pacific Ocean.

The beaches and the harbour play a major role in the leisure and sporting lives of Sydney-siders – yachting, surfing, sailboarding, swimming, boating, fishing, and water-skiing are all popular activities.

Many national parks and protected areas of natural bushland surround the city, and the beautiful Blue Mountains are a 90 minute journey to the west. Bushwalking, camping and picnicking are therefore also popular pastimes.

Perhaps the most famous of Sydney's landmarks is the spectacular Sydney Opera House with its graceful "sails". The Opera House has become Sydney's cultural centre, offering opera, ballet, drama and film. Many free concerts are staged on the promenades of the Opera House at weekends. The historic "Rocks" area is nearby and this part of the harbour foreshore is a hub of activity for both local residents and visitors.

Climate and Clothing: April in Australia is the middle of the Autumn season. Temperatures average 21.C during the daytime and around 18.C in the evenings. Dress for the Conference sessions will be business attire; evening and social functions will range from casual wear for the Australiana Bush evening to lounge suits and cocktail dresses for other dinners.

Time: Local Sydney time during April is Greenwich Mean Time + 10 hours.

Language: English is spoken throughout Australia.

Electricity: The electricity supply is 240 volts, 50 Hz. The connection for appliances is a flat 3-pin plug of unique design. Most city hotels provide 110 volt outlets for shavers.

Banking: Banks in Australia are open from 0930 to 1600 Monday to Thursday and from 0930 to 1700 on Fridays. Banks are closed all day on Saturdays and Sundays but exchange facilities are available at the airport and at most city hotels.

Currency: Decimal currency is used in Australia and currency units are dollars and cents. You should check with your bank for current exchange rates.

Shopping: Shops open from 0900 to 1730 during the week with late night shopping to 2100 on Thursday. On Saturdays, most shops open from 0900 to 1600. Popular souvenirs include opals, woollen knitwear, toy koalas and kangaroos, Australian wines and Aboriginal art.

Eating Out: Bistros, restaurants, cafes and coffee shops offer varied menus, prices and decor. Local seafood delicacies are recommended and include Sydney Rock Oysters, Balmain Bugs, Queensland Mud Crabs and Barramundi. These are delicious when accompanied by Australian wines, many of which have won major international awards. At some restaurants you can keep the liquor bill down by taking your own wine or beer. These are called "BYO" restaurants, the acronym standing for "bring your own".

Tipping: Tipping is not as widespread or regulated in Australia as it is in other parts of the world. Tipping is your prerogative, a reward for service. A 10% tip to taxi drivers, hotel staff and in restaurants could be proffered where deserved.

Visas: Most travellers will require a Visa for entry to Australia. Please check this matter with your airline or travel agent as immigration laws are very strict.

Panel of Judges To Screen Entries To Essay Contest

The entry papers to the IAPH Essay Contest received at the IAPH Head Office within September 1992 were from the following individuals.

The papers from entrants who qualified are to be screened by the panel of judges which will be appointed by Mr. Goon Kok Loon, Chairman of the IAPH Committee on International Port Development (Port of Singapore) for the final announcement of the contest results in early January 1993.

The top prize winner will be invited to the Sydney Conference in April and will receive the prize from the IAPH President at a Plenary Session during the Conference.

List of Entries to the 1992 Essay Contest

Name	Port/Organization	Country	Language
N.I. Majumdar,	Chittagong Port Authority	Bangladesh	English
J. Kurt L. Bonicelli	Empresa Nacional de Puertos S.A.	Peru	Spanish
Eyer Ahmed	Chittagong Port Authority	Bangladesh	English
Ho Kim Lan	Saigon Port	Vietnam	English
Joseph Peter Brown	Ghana Ports and Harbours Authority	Ghana	English
Rita Seno-Ogbinar	Philippine Ports Authority	Philippines	English
Abu Ahmed Shikdar	Mongla Port Authority	Bangladesh	English
W.G. Samaratunga	Sri Lanka Ports Authority	Sri Lanka	English
B. Prabakaran	National Institute of Port Management	India	English
Pope Gebo Zami	Papua New Guinea Harbours Board	Papua New Guinea	English
O.I. Umesiobi	Nigerian Ports Authority	Nigeria	English
V.J. Malyi	Tanzania Harbours Authority	Tanzania	English
Maduforo Godwin C	Nigerian Ports PLC.	Nigeria	English
Ahmad bin Idris	Johor Port Authority	Malaysia	English
Moumbagne Ibrahim Besm	Office National des Ports du Cameroun	Cameroun	French
Vasile Pistolea	Constantza Port Administration	Romania	English
(name to be known)	Puerto Conception del Urguay	Argentina	Spanish
(Entries from non-members)			
Umesh Chandra Dubey	Calcutta Port Trust	India	English
M. Mohan Rao	Visakhaptnam Port Trust	India	English
Federico Reiners Abreu & Alina Alonso Gonzalez	Instituto de Investigaciones del Transporte	Cuba	Spanish
Shri A.K. Parti	Morumugao Port Trust	India	English
J. Sarkar	Tuticorin Port Trust	India	English
A. Bhaskara Rao	Visakhaptnam Port Trust	India	English

Membership Notes:

New Members

Associate Members

IBM Asia Pacific Services Corporation, Public Sector Industry [A-II-1] (Japan)

Address: 3-9, Toranomon 4-chome
Minato-ku, Tokyo 105

Mailing Addressee: Mr. Kenshi Tanabe
Marketing Program Manager of Transportation

Tel.: (Tokyo 03) 3438-5671

Fax: (Tokyo 03) 3436-9295

President: Mr. Ned C. Lautenbach

Marketing Program Manager of Transportation: Mr. Kenshi Tanabe

Port, Harbour and Coastal Engineering [A-III-3] (Jamaica)

Address:	16 Hope Road, Kingston 10
Mailing Addressee:	Mr. John R. Lethbridge
Tel.:	809-926-6153
Fax:	809-926-6771

Changes

Mongla Port Authority [Regular] (Bangladesh)
Mr. Md. Rezwanul Haque has joined as Chairman of Mongla Port recently.

The IPD Fund: Contribution Report *25% of Targeted Amount Donated*

We thank you for the contributions or pledges from those organizations and individuals whose names are listed alphabetically in the box below, with the amount donated.

Contributions to the Special Fund
For the Term of 1992 to 1994
(As of Oct. 10, 1992)

Contributors	Amount
Paid:	(US$)
ABP (Associated British Ports), U.K.	3,000
Akatsuka, Dr. Yuzo, Univ. of Tokyo, Japan	100
Akiyama, Toru, IAPH Secretary General Emeritus, Japan	1,000
Barcelona, Puerto Autonomo de, Spain	1,000
Copenhagen Authority, Port of, Denmark	1,000
Cyprus Ports Authority, Cyprus	1,000
de Vos, Dr. Fred, IAPH Life Supporting Member, Canada	150
Dubai Ports Authority, U.A.E.	500
Dundee Port Authority, U.K.	250
Fiji, Ports Authority of, Fiji	100
Fraser River Harbour Commission, Canada	250
Ghana Ports and Harbors Authority, Ghana	250
Halifax, Port of, Canada	250
Japan Cargo Handling Mechanization Association, Japan	259
Klang Port Authority, Malaysia	200
Korea Container Terminal Authority, Korea	84
Marine Department, Hong Kong	500
Maritime Services Board of New South Wales, Australia	367
Mauritius Marine Authority, Mauritius	200
Montreal, Port of, Canada	500
Nagoya Container Berth Co., Ltd., Japan	518
Pacific Consultants International, Japan	243
Penta Ocean Construction Co., Ltd., Japan	500
Qubec, Port of, Canada	250
Shipping Guides Limited, U.K.	500
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$17,130
Pledged:	
Delfzijl/eemshaven, Port Authority of, the Netherlands	US$350
Grand Total:	US$17,480

* *Union of Autonomous Ports & Industrial & Maritime Chamber of Commerce (the Association of French ports) on behalf of the Ports of Le Havre, Bordeaux, Dunkerque, Marseille, Nantes-St. Nazaire, Paris and Rouen*

FIFTEENTH CONSULTATIVE MEETING OF CONTRACTING PARTIES TO THE CONVENTION ON THE PREVENTION OF MARINE POLLUTION BY DUMPING OF WASTES AND OTHER MATTER 9-13 November 1992 Agenda item 6

Consideration of the Report Of the Scientific Group of Dumping

Submitted by the International Association of Ports and Harbors (IAPH)

1. Introduction

1.1. The International Association of Ports and Harbors (IAPH) is pleased to attend the Fifteenth Meeting of Contracting Parties to the London Dumping Convention to participate in the discussion of matters relating to the disposal of dredged material at sea. The agenda of the meeting includes a number of recommendations adopted by the Scientific Group on Dumping at its Fifteenth Meeting (11-15 May 1992) that affect the treatment of dredged material disposal under the Convention. These are issues of major concern to ports worldwide, and IAPH welcomes the opportunity to assist Contracting Parties in the consideration of these issues.

1.2 IAPH invites Contracting Parties to consider the views set forth below during the work of the Fifteenth Meeting.

2. Provisional Acceptance of the Waste Assessment Framework (WAF)

2.1 At its Fifteenth Meeting, the Scientific Group agreed that the New Assessment Procedure (NAP) — which has been renamed the Waste Assessment Framework (WAF) — is scientifically and technically suitable for implementation. The Scientific Group has recommended its adoption by Contracting Parties on a provisional basis pending further action upon certain policy issues identified by the Scientific Group as requiring decision by Contracting Parties. IAPH supports this recommendation and believes that the WAF presents a workable and understandable waste assessment procedure that greatly improves previous guidance under the Convention.

2.2. One of the policy issues which has been brought to the attention of Contracting Parties is whether the "prohibition box" in the schematic for the WAF should be replaced by a "reverse listing box" which would specify substances determined to be acceptable for ocean dumping rather than substances prohibited from disposal at sea. Under this approach, all substances would be prohibited from sea disposal unless they are listed as acceptable for dumping. The starting point for this approach is the assumption that all dumping is harmful and is to be prohibited unless there is proof of harmlessness. In IAPH's view, such a change in approach is not warranted and would shift the emphasis under the Convention to regulation by "assumption" rather than by scientific assessment and determination. Because proof of absolute certainty is rarely possible, such a standard could have the practical effect of banning at sea without there being a sound scientific basis for doing so.

2.3 The reverse listing concept is also not required by the precautionary approach adopted at the Fourteenth Meeting. Under the precautionary approach, appropriate measures are to be taken when there is a "reason to believe" that harm is likely to occur. There is no "assumption" of harm in the absence of a "reason to believe" that harm is likely to take place. In no sense does the precautionary approach contemplate or require a per se prohibition against all dumping based upon unsupported assumptions that harm will occur.

2.4 In the case of dredged material, there is extensive experience concerning disposal at sea. The great majority of dredged material dumped at sea - approximately 90% - is clean sediment and is not contaminated. An extensive body of scientific data has also been developed with contaminated sediments and has demonstrated the unique characteristics of marine sediments to sequester and bind pollutants so they are not available to threaten harm to the marine biota. The criterion of "bioavailability" has become a major assessment tool in determining the acceptability of dredged material for disposal at sea. The use of various "special care" techniques has also been shown to allow the safe disposal of contaminated sediments. This experience with dredged material has established its suitability for dumping at sea.

2.5 If Contracting Parties wish to consider a reverse listing approach, this should include a recognition of the demonstrated suitability of dredged material for disposal at sea and a listing of dredged material as acceptable for ocean disposal in accordance with the regulatory scheme that has been developed under the Convention. The existing dredged Material Guidelines, when used with appropriate components of the WAF, have proven to be an effective means of assessing the acceptability of dredged material for sea disposal and in assuring that such disposal is consistent with the goals and purposes of the Convention.

3. Review of the Dredged Material Guidelines

3.1 The Scientific Group has recommended that a review of the Dredged Material Guidelines (Resolution LDC 23 (10)) be initiated at its Sixteenth Meeting in early 1993. IAPH supports this recommendation. IAPH was deeply involved in the development of the original guidelines and remains vitally interested in their review and improvement. IAPH would also like to express its interest, and offer its assistance, in participating in any intercessional working group that may be formed to study the guidelines and to make recommendations to the Scientific Group as to the need for revision.

3.2 IAPH also endorses the recommendation of the Scientific Group for (i) a review of application of key terms in the Convention in the context of the Dredged Material Guidelines (e.g., "trace amounts," "rapidly rendered harmless," and "significant amounts"), (ii) a consideration of the relationship between the WAF and the guidelines, and (iii) an evaluation of the option of least detriment in determining the appropriate means of disposal for dredged material. A detailed consideration of these issues will, in IAPH's view, lead to a more effective application of the guidelines.

3.3 In considering the relationship between the WAF and the Dredged Material Guidelines, IAPH believes that many parts of the WAF can be used effectively with the guidelines in assessing the suitability of dredged material for disposal at sea. At the same time, IAPH does not believe that the WAF can be incorporated in its entirety into the guidelines because many of its provisions are not applicable to the sediment matrix. The Scientific Group review will offer an opportunity to define those components of the WAF that might appropriately be incorporated into the guidelines.

3.4 IAPH has also long-supported selection of the option of least detriment in determining the disposal method most appropriate for dredged material. This is an essential element of a holistic approach to dredged material management that will assure the greatest degree of environmental protection in the choice of disposal method. In IAPH's view, this evaluation process should be included as a fundamental part of the Dredged Material Guidelines.

4. CONCLUSION

4.1 IAPH invites Contracting Parties to take these views into account in its discussion of these agenda items affecting the sea disposal of dredged material.

DWAYNE G. LEE
Chairman, IAPH Dredging Task Force
Dy Executive Director, Development
Port of Los Angeles

OPEN FORUM

Port Pricing: A Process

By Thomas J. Dowd
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School of Marine Affairs
University of Washington

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Despite the importance of port pricing, in most ports, the pricing process is more of an art form than a science!

Contrary to "common wisdom," there is a simple and logical port pricing process. This existing traditional financially-based process works very well in theory. However, in practice, it does not adequately address the current port pricing dilemma since it concentrates on international factors and ignores external ones.

Thomas J. Dowd

This paper will shed light on the port pricing arena, which seems to be constantly in the shadows, by providing an overview of the subject of port pricing and a guide to effective port pricing practices.

The cooperation and support of the American Association of Port Authorities (AAPA), especially the AAPA's Finance and Commerce Committees, and numerous Canadian and U.S. public port authorities in this Washington Sea Grant funded research project are gratefully acknowledged.

Introduction

Public port authorities provide services and lease facilities for a price. The total of these prices equals the Operating Revenues of a port. Operating Revenues are the major source of revenues at virtually every public port authority in North America. Thus, the success or failure of a port's pricing strategy is a major determinant of a port's viability.

Initially, when most public port authorities were formed, they relied on some form of subsidy (e.g. tax revenue, monetary grants and/or allocations, land grants, general obligation bonding authority) to cover capital and/or operating expenses. Today, some of those subsidies have been eliminated, some have been or are being reduced and many, if not most, of those that remain are under threat of reduction or elimination. This has forced public port authorities to emphasize the commercial side of their operation and de-emphasize the bureaucratic/governmental public agency side. This increasing emphasis on the "business side" means a much greater reliance on Operating Revenues. With this focus on Operating Revenues comes a tremendous pressure for public port authorities to price services and facilities to generate a profit or, at the very least, provide for self-sufficiency!

A major challenge for public port authorities in the 1990s will be to act more like a business. For some ports, meeting this challenge will determine their survival!

The Environment

Over the years, the North American port pricing arena has changed and ports have had to adjust to these changes in order to remain viable. Three of the most important changes are:

- Port pricing has significantly diminished as an effective means to influence the actions of either carriers or shippers. Items out of the port's control (e.g. systemwide intermodal considerations, single bill of lading relationships, in-port time for vessels, labor work rules, and carrier strategic considerations) have become high priorities on carrier/shipper agenda. Today, pricing of port services or facilities is often not a high enough priority on these agendas to actually influence decisions.

- Port pricing has undergone a series of significant market-driven changes that have dramatically altered the way that ports price their services/facilities. For example, historically wharfage, dockage, and demurrage were the major components of a port's tariff and revenue sources, but today these have been replaced by terminal leases and time/volume agreements. In some ports, wharfage and dockage charges exist primarily as a funding mechanism for terminal leases and other agreements.

- Customer relationships within the port have changed dramatically; lessor/lessee has replaced port/customer, and long-term agreements have replaced the ship by ship relationships. These long-term agreements have actually limited pricing options/alternatives for many ports.

Thus, the last decade has seen changes that have very significantly altered the effect of port pricing on carrier/shipper decisions, the way in which ports relate to their customers, the tools that ports use to price services/facilities, and the alternatives/options available in the port pricing arena!

The Players

Pricing is not the sole responsibility of the marketing department, nor is it the sole responsibility of the accounting department or any other single department or person. Each department, the executive director, and the Board all have some level of input into the port's pricing arena, and by involving these players early in the pricing arena, and by involving these players early in the pricing decision process, conflicts can be recognized and dealt with. It is important to remember that the influence of input and its weight in the ultimate pricing decision change constantly.

On a microlevel, if capacity is not a constraint and the port has significant excess capacity, it might be very appropriate for the marketing department to exercise a major influence on the pricing of a service.facility. Conversely, if capacity is constrained, the influence of the marketing department will diminish. In effect, supply and demand (competition) determine the relative strength of the various players in the port pricing arena.

On a macrolevel, it is virtually impossible for any public port authority to carry out effective pricing without some policy guidelines! The Board must provide leadership by formulating policy guidelines in order for a port to function efficiency in the pricing arena.

Creation of policy guidelines should be a part of the strategic planning process. These guidelines should include the definition of target customers and business segments as well as indicators for appropriate Return on Investment (ROI) range levels. Without these guidelines, virtually every project or customer is of equal importance, and this eventually forces the Board to make all the ultimate pricing decisions. Additionally, without appropriate policy direction from the Board, the executive director and port staff will be forced to waste time and resources following up every prospect with equal effort. Thus, a clearly articulated pricing strategy is mandatory for any successful public port authority.

Pricing Strategy

Port pricing cannot be dealt with in isolation since pricing is a major factor in the implementation of a port's strategic plan. Pricing must be viewed as one element in a much broader port management concept. This concept has three elements. The first is a port's planning and development philosophy and a port's goals or objectives. The second is a port's investment criteria and policies. The third is a port's pricing policies and techniques.

These three elements are closely interrelated. Significant change in any one of these three elements directly affects the other two elements. This means that a port's pricing approach should be supportive of the port's overall objectives, be consistent with the port's development and planning philosophy, and be a logical extension of the port's investment criteria and policies.

There are three basic approaches that ports consider in formulating their pricing policies. The first is a purely economic approach, which argues for marginal cost pricing. The second is a financial approach, which argues for prices to be set to recover fixed and variable costs and provide an adequate rate of return. The third approach is a public enterprise approach, which argues for prices to be set to recognize the need for the port to be a means to foster local development and existing local, regional and/or national economic activities. The third approach usually requires subsidization by taxpayers or other port customers.* 1)

The economic approach would be used by ports that are primarily concerned with being self-supporting (breaking even). The financial approach would be used by ports that want to maximize profit as their main port goal. The public enterprise approach would be used by ports that are primarily concerned with maximizing throughput and can afford to subsidize certain operations and functions in order to capture cargo.

Each of these approaches has its own strengths, but their basic requirements are often in conflict. The resolution of this conflict is the first step toward formulation of a pricing policy that is each port's foundation for rationally pricing facilities or services.

Note: 1) Discussions with Dr. David Olson, University of Washington Political Science Department*

There is no single pricing approach that is accepted and applied uniformly by all ports. Nor can it be said that there is a "best approach." Ports are different and these differences are reflected in the pricing approach or combination of approaches that they use.

There is nothing inherently desirable or undesirable in this diversity and lack of uniformity in pricing. The only thing that is mandatory for a successful port pricing policy is that it be supportive of the port's planning and the port's planning and development philosophy and objectives and the port's investment policies and criteria. As simple as this may sound, it is probably one of the most complex management decision areas for any port.

Port Pricing Process

Before one commences this process, it is necessary to answer affirmatively a single question — "Does this piece of business fit into the port's strategic plan?" If the answer is yes, the port should proceed. If it is no, then the port must determine if the strategic plan should be changed to accommodate it (such action would occur only after extensive study and discussion) or make the decision to reject the business. Unfortunately, many ports do not feel sufficiently comfortable with their strategic plan to make this latter decision.

There are three phases in the port pricing process: the internal examination, the external examination or "Reality Check," and the determination.

Internal Examination

The internal examination is the first phase. This first phase in the port pricing process provides a valid method of calculating the internal cost/expense based price or price range. The product of the internal investigation phase is the benchmark price.

There are four steps in this phase, each of which involves the calculation of an element of the benchmark price formula. The benchmark price is a price that would generate sufficient gross revenue to cover all direct and indirect costs associated with the delivery of a service or facility to the customer. These steps are: historical costs, imputed costs, return on investment, and sensibility analysis.

Historical Cost: The first step is the calculation of the historical costs (both direct and indirect) of providing the service or facility.

Historical costs are: (1) direct depreciation expenses on existing facilities/equipment and depreciation or amortization expenses on facilities/equipment to be constructed or acquired; (2) direct maintenance expenses for facilities/equipment including amortization of contingency funds; (3) direct tax and insurance expenses; (4) direct and indirect terminal operating expenses; and (5) administrative and general expenses including indirect depreciation, maintenance, taxes and insurance as well as some share of the port's general and administrative expenses.

If any of these expenses are passed on to the customer through lease provisions or in the articles of any usage or throughout agreement, or if any of these expenses are not applicable (e.g. terminal operating expenses on a terminal to be operated by a lessee or contract terminal operator), these expenses should be eliminated from the above formula.

Imputed Cost: The second step is the calculation of imputed costs. Imputed costs are unreimbursed and often unrecorded benefits provided by an outside entity (e.g. fire, police, computer, or other services).

Return On Investment: The third step involves computation of return on investment (ROI) for both land and facilities/equipment.

Basing the ROI computations on market or replacement value rather than book value is more realistic, even though establishment of market or replacement value may pose a problem for the port.

Sensitivity Analysis: The calculation of historical cost, imputed cost, and return on investment requires that certain assumptions be made about various cost elements. These assumptions take the form of estimates or educated guesses about the applicable amounts/percentages of certain costs and/or whether to include a cost item in the benchmark price formula at all.

Despite the fact that the analyst bases these assumptions on the best available information, these assumptions may lead to understatement or overstatement of the costs. Thus, it is important for the analyst to state clearly the critical underlying assumptions used to calculate the cost estimates and to test how sensitive each is to the calculation of the benchmark price.

The price per unit of cargo or the normal published tariff rate is the benchmark price (historical cost + imputed cost + return on investment, tempered by the sensitivity analysis) less any applicable usage revenue (e.g. dockage, wharfage, storage charges) divided by the throughput volume.

A major controlling factor in the successful execution of the internal examination phase of the port pricing process is the port's own accounting system! In order to gain the maximum benefit from this first phase, a port must have a fairly sophisticated cost accounting system. The system must be able to identify the various cost computation components (e.g. costs by line of business, function and/or facility). For many ports, the absence of or lack of sophistication of the cost accounting segment of their accounting system may make it difficult to accurately establish a benchmark price!

Container Terminal Leasing/Pricing Methods and Their Economic Effects, a paper in the Washington Sea Grant "Port Management Series," provides additional information about container terminal leasing and pricing.

Usage Pricing for Public Marine Terminal Facilities, published by the U.S. Department of Transportation, Maritime Administration, provides a comprehensive explanation of the elements used in the calculation of dockage and wharfage tariff charges.

External Examination or Reality Check

The product of the first phase of the port pricing process is the "benchmark price," a specific number or numerical range that, if used, would ensure that the port will cover all direct and indirect, depreciation and debt service expenses and earn a profit. In the "ideal world," the port would charge the customer the benchmark price and prosper. Since the "ideal world" seldom exists for ports, the next phase is designed to subject the benchmark price to a series of tests that will determine its applicability/usefulness.

This series of tests is known as the Reality Check! Just as the first phase of the port pricing process concentrates on internal factors (e.g. actual, anticipated or estimated expenses and a target ROI), the second phase concentrates on external factors (e.g. strategic goals and objectives of the port, competition, business conditions).

There are two steps in the external examination/Reality Check phase: consideration and negotiation.

Consideration: This step involves listing and prioritizing the various elements that might affect the port's ultimate pricing decision.

These factors would include at least the following: availability of excess capacity; cash flow requirements; competitive situation of the port versus other ports capable of and/or willing to take on the business, economic/political implications (e.g.regional, local, and, especially in Canada, national economic goals/objectives), growth management impacts (e.g. utility, road, rail, and mass transit concerns); and environmental implications.

Once all factors have been recorded, it is necessary to weigh each and eventually prioritize them. This prioritization allows the port to move into the next step in this phase, negotiation.

Negotiation: This step is the most difficult one for most ports. It requires that representatives of the port and customer meet to discuss the port's proposed price for the service/facility. This price can be the benchmark price or the benchmark price modified by the appropriate external factors.

In any event, the potential customer will most likely make a counteroffer or reject the initial port price offered. At this point, the port enters negotiation with the customer. The possible tactics/strategies for price negotiation are numerous, and the specific situation will dictate which the port will employ.

However, prior to each round of negotiation, the port should examine the priorities of the various external factors as well as the potential effect that the new price offer may have on the port's other facilities/cargoes and the port's overall financial condition.

Negotiation is a rational process not an emotional one!

Determination

This phase involves approving the negotiated price. Normally, if the port has a well-articulated pricing policy, the ultimate decision on most prices can be approved at the executive director level.

However, if the port lacks such a policy or is faced with a reservation of price approval power on certain or all ultimate price decisions, these decisions will be made at the commissioner level.

If the ultimate pricing decision will be made by the Commission, it is necessary that a formal staff recommendation and supporting documentation be made available to the members prior to their voting!

The Tariff Rate

There is a general assumption that the rates published in the port's official tariff apply to all customers. That is an incorrect assumption!

At best, a published tariff rate is the benchmark price, less usage revenues (e.g. preferential berthing charges), divided by estimated throughput. At worst, it is a random number, arrived at without any study of expense data, that appears to be in line with the tariff rates published by competing ports.

In fact, published tariff rates are an effective and flexible marketing tool. These rates are often a starting point for negotiation of a time/volume agreement, a first or last port of call status agreement, or an increase in throughput from a carrier or shipper. This is a very valid use of these rates since, in most cases, they have not been subjected to any analyses of economy of scale profit potential or contracted time/volume effects on expense levels.

It is extremely important to remember that, if at all possible, any deviation from a published tariff rate should be allowed only if there is a written agreement between the port and carrier/shipper spelling out exactly what guarantees of additional throughput or other considerations are being made to justify such a deviation. Ports must recognize that any deviation from a published tariff rate is a valuable consideration that should be traded (not given) away.

Conclusions

There are many areas that must be better understood by ports before they can perfect their pricing techniques.

One of the most important of these areas is the port vs. port negotiating tactics of some carriers/shippers. At this time, port competition is a fact of life and cannot be ignored! But in many cases, carriers, shippers, and other customers use this competitive situation against ports. Playing one port against another seems to be a normal negotiation technique. Unfortunately, in many instances, this tactic is very effective in removing port goals/objectives and an appreciation of actual costs from the port pricing decision agenda and replacing them with emotion. When this happens, ports bid blindly in order to get a specific customer and the customer usually gets the services/facilities at a subsidized rate. One often wonders if the port that eventually obtains the business is the winner or the loser!

The process outlined in this paper will facilitate the port's pricing of both services and facilities. It will help ports price in a logical and economically sound manner as part of an overall strategy, provide a means to give due consideration to both the internal and external factors affecting the pricing arena, and move towards a more businesslike internal environment.

About the Author

Thomas J. Dowd, FCIT, is a Sea Grant Port Industries Specialist and Affiliate Professor (Port/Marine Transportation Management) with the School of Marine Affairs at the University of Washington.

Other Port-related Publications

Port Capital Investment Decision-making:

(Continued on Page 17)

Diploma in Shipping & Port Management '93

Jointly Organised by PSA'S Singapore Port Institute & University of Delaware, USA:

The Programme

Objective

The programme is designed to present information and materials which are academically sound and of special value to personnel engaged or likely to be engaged in the operations and management of shipping and ports. Through a series of lectures, readings, computer exercises and case studies, students will study the following aspects of shipping and port management:

(a) The international trade environment in which the modern shipping industry must operate;
(b) The essential elements of marketing, accounting, and finance which are key to the efficiency of the shipping industry and the management of ports;
(c) The organisation and administration of shipping companies and ports, with uses of automation and information systems;
(d) The current and future technological developments which are likely to result in major changes in the operations of ships and ports and which will require imaginative responses by carriers and port authorities in physical as well as service facilities;
(e) The legal framework within which shipping and ports must operate, including international law of the sea and maritime law.

Structure

The programme comprises 5 modules of intensive lectures spread over 5 months and interspersed with periods of self-study. Each module will be one week in duration. Lectures will be held from Mondays to Fridays from 0900-1600 hours and from 0900 to 1200 hours on Saturday.

Schedule

Lectures on the five modules will be conducted in Singapore at SPI's premises by well-qualified and experienced lectures selected by the University of Delaware, USA. The schedule (Module & Dates and Lectures) will be as follows:

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Structure and Technological Changes on the Economics of Port Locations (19 — 24 April 1993): Dr Roy J Pearson;

Governance, Planning & Design (17 — 22 May 1993): Captain D Stewart;

Accounting & Financial Considerations (14 — 19 Jun 1993): Dr John J Hampton;

Maritime Law and Policy (12 — 17 July 1993): Dr Geard J Mangone.

End-of-module examinations will be conducted on the following dates:

Module I: Saturday, 17 April 93;
Module II: Saturday, 15 May 93;
Module III: Saturday, 12 Jun 93;
Module IV: Saturday, 10 Jul 93;
Module V: Saturday, 07 Aug 93.

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- Researching maritime markets.
- Promotion strategies for seaports.
- Marketing segmentation and target marketing.

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- Structural change in shipping and technological change in ships.
- Developments in the inland transportation sector.

- Port developments, terminal design and costs.
- Shipping regulation and liner shipping conferences.

c. **Governance, Planning & Design**
- Port systems and governance.
- Terminal planning and port environmental issues.
- Terminal management and support operations.
- Design of mechant vessels and operations.
- Vessel management and future ship design.

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- Economics of the vessel and voyages.
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- Role of port and transhipment terminals.
- Valuation of shipping company assets.

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Candidates with a minimum of 5 GCE "O" levels or equivalent qualifications may apply for admission into the programme. Working experience in the port and shipping industries will be an advantage.

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Students who successfully complete the required course of study and who pass the end-of-module examinations in accordance with the standards set by the University of Delaware, USA, will be awarded a Diploma jointly issued by the SPI and the University of Delaware. Students who fail in one or more of the end-of-module examinations will only be issued with Certificates of Attendance.

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Enquiries

For further information on the programme, please contact:

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Port of Singapore Authority
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Port Pricing: A Process—

(Continued from Page 15)

A Process
by Thomas J. Dowd and Candace Jonson
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A Perspective
by Thomas J. Dowd and Thomas M. Leschine
WSG-AS 89-5
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Ports Privatization & Labor Reform

A Conference in Miami, December 3-4, 1992
The WATERFRONT Partnership in association with Caribbean/Latin American Action

An expanding global makert and the change in trade partners has encouraged ports in Latin America, Europe and Asia to improve their efficiency and privatize.

In the U.S., ports are increasingly viewed as sources of revenue for State Governments and are seeking to generate new incomes.

This conference will examine the possibilities for port authority privatization and larbor reform in North and Latin America.

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Leo Donovan, Booz Allen Hamilton
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Report of IMO/ESCAP Seminar in Yokohama 31 Aug. – 4 Sept. 1992

(Abstract)

Organization of the Seminar

The IMO/ESCAP seminar on environmentally sound port development and management was held at Yokohama from 31 August to 4 September, 1992. It was organized by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the International Maritime Organization (IMO); cosponsored by the United Nations Environment Programme (UNEP), the Swedish International Development Authority (SIDA), the International Association of Ports and Harbours (SIDA), the International Association of Ports and Harbors (IAPH), Ministry of Transport (MOT), Japan, and the Overseas Coastal Area Development Institute of Japan (OCDI); and hosted by the City of Yokohama.

Attendance

The seminar was attended by 60 participants of 27 nationalities and scores of observers. Participants from the Asia and Pacific region were 25 from Bangladesh, China, Fiji, India, Iran, Malaysia, Maldives, Myanmar, Pakistan, Papua New Guinea, The Philippines, Singapore, Sri Lanka, Thailand and Viet Nam. Guest speakers were 17 from Asian Development Bank (ADB), International Association of Independent Tanker Owners (INTERTANKO), Australia, Canada, Hong Kong, Japan, Korea, the Netherlands, Sweden, United Kingdom, United States of America. Observers were invited from the World Bank, Denmark, Japan, Korea and Thailand.

Opening Statements

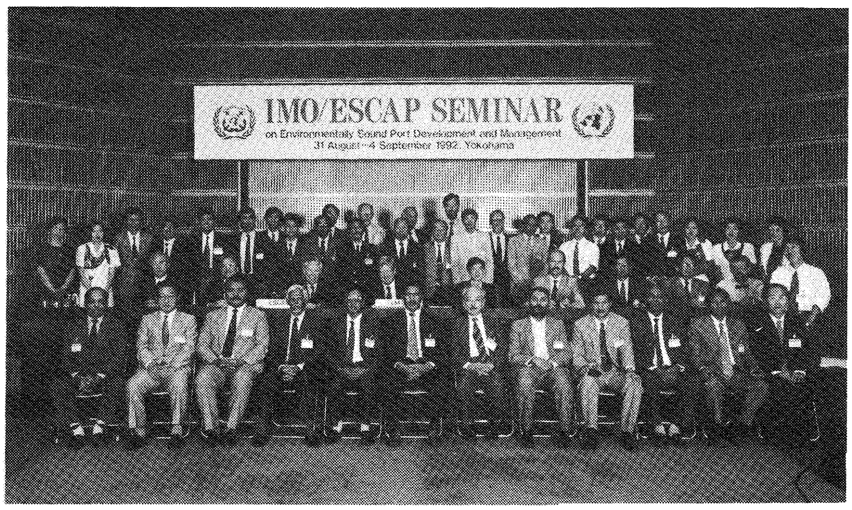
Opening addresses were delivered by Mr. H. Takahide, Mayor of Yokohama; Mr. D.L. Turner, Chief, Transport and Communications Division, ESCAP; Dr. M. Nauke, Chief, Office for the London Dumping Convention, IMO; Mr. M. Kamimura, Director General, Ports and Harbours Bureau, MOT; Mr. H. Kusaka, Secretary General, IAPH; and Mr. T. Hirota, President, OCDI.

Country Papers

Representatives of 15 countries of the Asia and Pacific region presented a paper on the latest situation of their ports, environmental problems/issues, regulations and activities for port environment protection. The presentations provided a sound for discussion during the seminar.

Presentations

Twenty-one papers on port-related environmental issues were presented at the seminar. Topics discussed included environmental problems in ports of the Asia and Pacific region, envi-



ronmental impact assessment, port environment protection, port reception facilities, dredging and disposal of dredged materials, and marine pollution.

Summary and Recommendations

The noted the importance of EIA and the need for proper environmental guidelines for port development and management. In addition to general guidelines for EIA, released from international organizations and other sources, more detailed specific guidelines for many kinds of ports and pollution sources were considered to be beneficial to developing countries. In this respect the participants commended ESCAP for taking the initiative of developing such guidelines. Additionally the participants proposed that national and sub-regional standards for the quality of the environment should be developed in accordance with local environmental characteristics. The importance of international conventions pertaining to port development and operations should be brought to the attention of decision makers as an important way of increasing EIA expertise. Public awareness in environmental issues plays a key role in mobilizing resources and preventing environmental deterioration. More effort should therefore be given to keeping the port community more involved with the development process.

(Report prepared by the ESCAP)

LNG Shipping: Healthy Growth Forecast

A major new study* from **Ocean Shipping Consultants** forecasts large-scale expansion in the LNG shipping sector, whilst the LPG carrier market is expected to remain depressed over the near-term.

The following is a summary of the main findings of the 187-page Report.

Future LNG Demand

- With the expected outlook for natural gas demand in the world being highly positive — based on its environmentally favorable features, with natural gas one of the cleanest fuels available, and presenting less of a safety hazard than nuclear energy — the prospects for LNG trade growth are also very healthy.
- For the world LNG trade in total, the aggregate level is forecast to increase from the 77bn cu.m of 1991 to 124bn cu.m in 2000, and to 143.7bn cu.m in 2005. Overall forward growth therefore approximates 87% — this the equivalent of annual expansion of just over 4.5% throughout the whole of the forward study period.
- Under alternative High Oil Price and Low Oil Price scenarios, the forecast 2005 levels are 117bn and 170bn cu.m respectively — representing forward growth of 52% and 121%.
- With Japan currently dominating world trade — accounting for 66% (51bn cu.m) of the 77bn cu.m traded in 1991 — much of the world trade expansion will be concentrated on extra shipments to Japan. Imports are thus expected to rise by around 34% to 68.5bn cu.m by 2005.
- Similar extra volumes of LNG shipments are expected in the rapidly growing market of South Korea — imports forecast to increase from the 3.7bn cu.m of 1991 to almost 19bn cu.m by 2005. Such is the scale of expected sector growth that even under a scenario of sustained high oil prices, this import aggregate is expected to reach over 10bn cu.m in the forward period — almost treble the level recorded in 1991.
- Rapid growth is also expected in Taiwan, with imports rising from 2.1bn cu.m to 9.4bn cu.m by 2005.
- Whilst a number of factors with conflicting implications continue to make the likely forward profile highly uncertain, US consumption is expected to re-emerge as a significant market feature, with associated imports set to increase from the 1.9bn cu.m of 1991 to 8bn cu.m by 2000 and approximately 11bn cu.m by 2005.
- In Western Europe, widespread gas consumption growth is set to be only partly offset by increased gas pipeline transportation. New markets set to be significant include Portugal, Turkey, and Greece.

Future LNG Shipping

- For future levels of shipping demand, the overall forward development pattern will be similar to that for trade volumes, although with an increasing number of 'new' trades set to emerge, shipping demand growth will be proportionately greater than trade volume expansion, this largely due to the expected growth of relatively long-haul trades.
- Whilst trade volume growth to 2005 is forecast at 87%, vessel employment growth is projected at 101%, with the average shipping distance for the world LNG trade as a whole expected to increase from the 2,560nm of 1991 to around 2,760mm in 2005.
- With regard to forward newbuilding requirements in the LNG sector, it is estimated that in addition to the current orderbook, there will be an extra vessel newbuilding requirement of 6.6m cu.m for the forward period as a whole. This level does not include the 2.4m cu.m. of tonnage currently on order and due to be delivered over the 1992-97 period.
- This translates to the equivalent of an extra 3-4 ships of 125,000 cu.m capacity required by 1995, a further 19 over the latter 1990s, and 30 more in the following half-decade.

Future LPG Demand

- Total world LPG deep-sea movements are forecast to increase by approximately 21mt over the forward study period, this representing total forward expansion of some 71%.
- Whilst considerable growth is expected for the USA, West Europe and Japan, the most significant tonnage expansion is expected in the 'secondary' markets — mainly the developing Asian markets such as South Korea and Taiwan.
- Demand growth in the USA is set to be most rapid in the chemicals industry, although this will be dependent on LPG remaining price-competitive with naphtha. Aggregate LPG consumption in the USA is forecast to rise from the 33.5mt of 1991 to almost 41mt in 2005 — representing overall forward growth of 22%.
- The rise in consumption is likely to translate into a significant expansion of deep-sea imports, with annual volumes likely to develop from the 2.6mt level of 1991 to almost 6.5mta by the end of the forward study period.
- For West Europe, high growth rates are expected for the transportation and, less significantly, the chemical sectors. The power generation sector is also likely to witness a marked increase in LPG penetration, this trend favoured by the clean-burning nature of LPG relative to oil and coal.

• At the aggregate level therefore, LPG consumption is forecast to approximate 25.0mt in 2000 and 26.2mt in 2005 — this against the 22.3mt level recorded in 1991. Deep-sea LPG imports are expected to increase from the 8.2mt of 1991 to 9.1mt in 1995 and around 10.5mta by 2005.

• In Japan, forward development is likely to approximate a continuation of recent years — with demand growth in the industrial and residential/commercial sectors. Total demand is set to develop from the 19.6mt of 1991 to over 22.5mt by 2000, and almost 24.5mt by 2005 — this translates into imports reaching 19.4mt by 2005 from the 14.7mt of 1991.

• Elsewhere in Asia, demand growth prospects are good — based on the expected energy and petrochemical sector growth for the newly industrialised countries, and on the growing need for easily handled heat source in the domestic and commercial sectors. Thus, total demand in South Korea is forecast to increase from the current level to well over 5mta by the late 1990s. Imports are forecast to average 3mta by the end of the decade, and over 5mta by 2005.

• The Gulf War highlighted the need for Japan to diversify its supply profile away from the region, and the past year has witnessed several attempts to secure contracts with suppliers in South/South East Asia, Australia, and also North Africa.

• Subject to availability and cost therefore, alternative supply sources to the Middle East are likely to be favoured, although given the volume of capacity and expected expansion thereof in the region, the Middle East is expected to continue to dominate shipments world-wide.

Future LPG Shipping

• With total overall trade growth for 1991-2005 projected at 71%, the corresponding expansion for LPG shipping demand approximates 67%. LPG shipping demand is therefore forecast to increase from the 123.2bn cu.mM (cubic metre miles) level of 1991 to 188bn in 2000 and 206bn at the end of the study period.

• A significant volume of employment opportunity for LPG carriers will continue to be generated by international trade in ammonia and in petrochemical gases such as ethylene, butadiene, propylene and vinyl chloride monomer (VCM).

• For total future LPG and non-LPG employment for LPG carriers, the annual volume is expected to rise from the 1991 aggregate level of 154.5bn cu.mM to 253.2bn cu.mM in 2005. This represents forward period expansion of approximately 64%.

• The LPG carrier fleet is expected to increase from the 10.2m cu.m volume of 1992 to 12.6m by 2000 and 14.0m cu.m by 2005 — this representing overall forward growth of some 3.8m cu.m or 38%.

• Total LPG vessel newbuilding requirements (excluding the vessel orders already placed at shipyards) for the rest of the 1990s aggregate to approximately 3.9m cu.m, with an extra 3.8m cu.m required in the 2000/05 period.

• Just over half of this total consists of large > 60,000 cu.m vessels, with the small < 20,000 cu.m sector accounting for approximately 29%.

Implications for Ship-builders

• The world shipbuilding industry is set to witness a large increase in LPG carrier construction. Activity levels will continue to be relatively high, although competition for newbuilding contracts between yards will continue to be fierce. Co-operation between individual shipbuilders in tank design and contract sharing might provide the key to securing at least part of the valuable multi-vessel orders set to be witnessed — this process already witnessed in Japan and South Korea.

• Shipyards active in the LPG sector are set to witness low levels of newbuilding interest over at least the near-term. With an expectation of substantial volumes of new vessel ordering later in the study period — in response to trade expansion and tonnage scrapping — yards maintaining a presence in this sector will be well placed to secure substantial newbuilding contracts.

Implications for Ship-owners

• The issue of the economic life of LNG carriers will continue to be very much at the forefront of fleet development, given the volume of tonnage delivered in the early/mid-1970s. The significance of potential vessel scrapping will be further heightened by the likely increase in concern over the safety of LNG transportation.

• For owners of ..... long-term time charter.

Summary: Projected LNG Shipping Demand to 2005

	Shipping Demand Tn cu.m Miles	Trade bn cu.m
1989	164.7	64.6
1990	185.7	72.3
1991	197.1	77.0
1995	246.7	97.9
2000	329.6	124.1
2005	396.3	143.7
High Oil Price		
2000	271.6	103.8
2005	326.1	116.6
Low Oil Price		
2000	370.8	140.2
2005	478.7	170.5

Summary: Projected LPG Trade & Shipping Demand to 2005

	Shipping Demand bn cu.m miles	Trade mt
1991	123.2	29.4
1995	163.8	38.6
2000	187.7	45.3
2005	205.9	50.3
High Oil Price		
2000	164.4	38.0
2005	162.0	37.5
Low Oil Price		
2000	205.1	50.1
2005	246.4	61.2

Source: Ocean Shipping Consultants Ltd.

• The continuation of low freight rates will focus attention on the scrapping decision. This will be of most particular significance in the small and medium size classes, given the relative youth of the larger fleet category.

• Given the poor demand/supply outlook, employment opportunity in non-LPG trades is likely to become of increasing significance, especially for the smaller size classes and in the mid-1990s.

• Market conditions for owners are likely to remain difficult over the near-term. The pace and extent of market recovery from the mid-1990s will largely depend on the scale of vessel scrapping undertaking in the interim period, with vessel demolition levels required to remain significant throughout the second half of the 1990s if freight rates are to witness maintained recovery.

The Report also incorporates a full listing of the current and planned world LNG carrier fleet, as well as details of all existing and planned LNG supply contracts throughout the world.

The extensively detailed 187-page Report contains analysis of all the main aspects of the LNG & LPG shipping sectors, and is essential reading for all parties with an involvement in any part of the gas trade and shipping industries.

* *LNG & LPG CARRIERS: DEMAND & SUPPLY PROSPECTS TO 2005*

Available immediately from:
Study Sales Department
Ocean Shipping Consultants Ltd
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The Americas

Halifax Welcomes New Container Service

With Port Days '92 events under way on September 13, Port officials are especially pleased to welcome the decision by Panama-based, MELFI MARINE CORP. to initiate a new container service to Halifax. The service is scheduled to start with the sailing of the M.V. *Erizo* arriving Halifax on September 30. *MELFI* will call at Halterm Container Terminal every 20 days, utilizing 130 TEU cellular container vessels which are also able to accommodate breakbulk cargo.

The ships will sail direct for Havana from Halifax, offering connections via a modern five-ship cellular fleet of vessels to Kingston, Jamaica; Cartaagena, Colombia; Puerto Cabello, Venezuela; Panama, and Tampico, Mexico.

Ms. Debbie Milton, Halifax representative for Protos Shipping Limited, agents for MELFI, stressed that the line will provide new transportation options for Atlantic Canadian shippers to access growing markets in South America and Mexico, in addition to service to Cuba and Jamaica. She added that Protos Shipping will look forward to assisting local shippers in penetrating these markets.

Mr. David Bellefontaine, President and CEO of the Halifax Port Corporation welcomed the line, stating that joint efforts by port interests, including the port, labour, Canadian National and terminal operators are beginning to pay off and will continue to be key factors in the Port's continued efforts to capture new business.

VPC: Record Growth in Containers, Passengers

Vancouver Port Corporation (VPC) statistics for the first six months of 1992 reveal that although total port tonnage is down two percent from the same period in 1991, the container, grain and cruise sectors are setting a record pace. Mid-year total tonnage registered at 34.9 million tonnes, compared to 35.6 million tonnes last year.

According to VPC, container traffic has reached 1.9 million tonnes (217,650 twenty foot equivalent units) — a 25 percent increase over the 1.5 million tonne six-month total in 1991. Aggressive marketing, increased productivity and facility upgrades are credited for attracting new container lines and increased capacity.

Cruise passenger totals have also surged, indicating the cruise sector may be heading for its tenth consecutive year of growth. Increased capacity has countered a reduction in cruise ships, leading to a ten percent increase 150,686 revenue passengers.

In the bulk sector, grain has soared 20 percent to reach 7.9 million tonnes, due to bumper crops in 1990 and 1991. Pulp has also maintained a strong performance despite pulp industry labour disputes, totalling 1.2 million tonnes, compared to 1.1 million tonnes in 1991.

However, other bulk products have been experiencing a slump. Disputes at south eastern coal mines have reduced coal traffic by 10 percent to 11.4 million tonnes. Shifting markets in sulphur and potash resulted in 12 percent and 27 percent decreases respectively, although orders for both products indicate they will resume normal levels.

A 1.4 million tonne total for lumber reflects a 17 percent decline over last year, the main factor behind a drop in general cargo from 3.6 million tonnes last year to 3.2 million tonnes through June this year.

Port Manager and C.E.O. Captain Norman Stark notes that although Canadian exporters are facing challenges, "... several sectors are experiencing significant gains, and everyone at the port is dedicated to helping all our customers remain competitive in the global marketplace."

Port Leaders Reevaluate Partnership with Corps

At the American Association of Port Authorities' (AAPA) 81st annual convention held September 21-25, 1992, in Anchorage, Alaska, port leaders responded to recent events in California by unanimously recommending adoption of a resolution urging that state ad local governments refrain from any action that will deprive port agencies of their ability to finance the development of public ports.

"Ports are America's gateways to international markets," said Ms. Anne D. Aylward, AAPA's immediate past Chairman of the Board and Maritime Director of the Massachusetts Port Authority. "It is in the interest of all Americans that ports have the resources to finance the development of terminals necessary for our nation to remain globally competitive."

The action of state and local governments to divert port funds in order to meet non-port budgetary needs has raised grave concern among public port officials. Such action not only deprives public port agencies of the ability to meet the nation's needs for international shipping, but may also be of questionable constitutionality. Diverting port funds may call into question the viability of bond covenants and other contractual obligations entered into for financing port capital development projects.

In adopting the resolution, AAPA leadership was responding to the California legislature's recent action allowing cities to take reserves from major California ports. Ezunial Burts, Executive Director of the Port of Los Angeles, requested that AAPA form a special task force to address the impact of California's actions on the nation's ports.

AAPA's U.S. members also supported a resolution favoring reexamination of the way channel improvement projects are funded and implemented. The resolution resulted from the recommendation of a special task force on the AAPA/Corps of Engineers "partnership", established by Aylward.

"Our goal is to assure the timely and cost-effective completion of deep-draft navigation projects. That should also be the Corps of Engineers' goal. Our paths diverge in the growing conviction among AAPA members that the only way to get more cost-effective and timely projects is to give the ports more control over all aspects of project implementation," Aylward said.

AAPA also backed a proposal to improve Customs' enforcement and collection of the Harbor Maintenance Tax. The AAPA position endorses the recommendation of a working group of the Treasury Advisory Committee to Customs, which includes port representatives and members of the trade community, that would require freight forwarders and brokers to collect the Harbor Maintenance Tax.

Currently, the Customs Service is charged with the responsibility of collecting the Harbor Maintenance Tax, which funds maintenance of navigation channels. The Committee believes that implementing regulations can be issued within existing laws. Changes in collection would increase collections and ensure a more equitable collection regime by fairly allocating the responsibility of paying to all shippers.

In addition, AAPA proposed a resolution which favors elimination of trade taxes. "Trade taxes discourage trade and their cumulative impact is unknown," Alyward said. She added, "we will continue efforts to work with Congress and the Administration to promote better understanding of the importance of international trade to the economic well-being of the Western Hemisphere and the regressive nature of taxes on trade."

Finally, AAPA members stressed the need for passage of the Water Resources Development Act of 1992 before Congress recesses in October. "Ports have met the commitment to pay their local share of dredging costs since 1986," AAPA President Erik Stromberg said, "and we hope Congress will live up to its commitment to provide authorization to maintain our nation's vital water resources infrastructure. We hope Congress avoids bogging down the bill with lots of issues unrelated to maritime issues — it should focus on necessary water resource needs, and not create more regulatory hurdles."

Founded in 1912, AAPA represents virtually all public port authorities and agencies in the United States, as well as port agencies in Canada, Latin America and Caribbean.

Houston 6th in Capital Improvements Spending

Houston ranked sixth among U.S. public ports in terms of expenditures for capital improvements in 1990.

Capital expenditures at the Port of Houston totaled $38.7 million in 1990, according to the Maritime Administration's U.S. Port Development Expenditure Report. The results of the study were reported in a recent American Association of Port Authorities newsletter.

Houston and nine other U.S. ports accounted for more than 72 percent of total port expenditures in 1990, the report indicated.

U.S. public ports spent more than $2 billion for capital improvements in 1988-1990 and plant o spend almost $5 billion over the next five years, the report indicated.

Public port expenditures totaled $668 million in 1990, down from $689.2 million in 1988. The U.S. Gulf accounted for 14.6 percent of the public port expenditures, with expenditures of $97.7 million in 1990.

"Specialized general cargo" facilities, which includes container, RO/RO and similar facilities, accounted for $335.7 million, or 51.4 percent, of 1990 expenditures. Other expenditures by facility type were: general cargo, $88.7 million, or 13.6 percent; bulk, $48.6 million, or 7.4 percent. "Other facilities" — including structures, space and fixtures not directly related to the movement of cargo — totaled $180.2 million, or 27.6 percent.

(Port of Houston)

Georgia Ports: New Officers Elected

Mr. J. Dewey Benefield, Jr. of Sea Island has been elected chairman of the Georgia Ports Authority (GPA) board of directors.

Other offices elected at the August board meeting included Mr. William O. Faulkner, Jr. of Macon as vice chairman and Mr. Harry C. Jackson of Columbus as secretary-treasurer.

The nine-member authority board is appointed by the governor to oversee activities of GPA's worldwide operations which include its marine facilities at Savannah, Brunswick, Bainbridge and Columbus.

Mr. Benefield, who joined the GPA board of directors in 1986, is executive vice president of the Sea Island Properties. He replaces Mr. Thomas J. Dillon of Savannah as chairman.

Garden City Cranes To Be Refurbished

Kocks Crane & Marine Company of Pittsburgh, Pennsylvania recently received a substantial contract from the Georgia Ports Authority for the refurbishment of two Kocks container cranes located at the Port's Garden City Terminal in Savannah, Georgia.

The contract will include raising the entire structure 20 feet and extending the waterside boom making the dimensions of the crane(s) post panamax. The refurbishment contract will also include a completely new D.C. digital drive system supplied by ABB of Milwaukee. Engineering will be carried out by Vulkan Kocks GmbH of Bremen, Germany, the parent company of Kocks

Crane & Marine Company.
(Kocks Crane & Marine Company)

Port of Long Beach: Terminal Development

Long Beach Harbor Commissioners accepted a plan to purchase more than 60 acres of land for future port development and expansion of Toyota's export operation in Long Beach from the Union Pacific Resources Company, (UPRC), Union Pacific Railroad (UPRR) and Toyota Motor Sales (TMS), U.S.A.

The port and UPRC also announced negotiations scheduled over the next three years which could lead to the port's purchase of more than 600 acres of land for further development as cargo terminals.

The first phase of the long-range joint development plan will allow the port to purchase from UPRC more than 60 acres of land north of Cerritos Channel and east of the Terminal Island Freeway. UPRC currently uses the land for oil production, but has agreed to remove and consolidate oil production equipment to make way for port development.

The 60-acre purchase will include about 40 acres adjacent to an existing 70-acre port tract located immediately east of the Terminal Island Freeway, plus several other parcels.

"This acquisition will allow the port to develop a 100-plus-acre container terminal in the North Harbor area," said port Executive Director S.R. Dillenbeck. "That development will mean more jobs and revenues for Long Beach and surrounding cities."

While he did not identify a tenant for the terminal, Dillenbeck said that several major shipping companies have already expressed interest in the site.

Additionally, the first phase of the plan will add another 33 acres of land and provide improved rail access to the port's 144-acre Toyota terminal. The additions will allow Toyota to expand its domestic, export and import automobile operation in Long Beach, said Mr. Hiroshi Imai, TMS senior vice president and chief coordinating officer.

Mr. Imai indicated that Toyota will export approximately 50,000 to 60,000 U.S.-made autos through Long Beach in the next few years. The expanded operation will increase Toyota's labor force by approximately 170 workers.

Officials of UPRC said the company plans to work with the port and state agencies to obtain the necessary environmental approvals to allow the port to develop the valuable harbor property.

This will allow UPRC to sell the land, oil reserves and related assets that are currently on the property in the harbor area.

"If we are successful in our second phase negotiations, the purchase of Union Pacific's property and assets will represent the largest purchase of private property for port development in the 81-year history of the Port of Long Beach," Dillenbeck said. "It is an essential element of our expansion plan."

According to Dillenbeck, port cargo forecasts indicate that the amount of goods passing through Long Beach will double by the year 2020. In order to accommodate that surge in cargo, both in and out of the Long Beach area, the port must add new terminals, he said.

"With environmental regulations restricting landfill development within the harbor, we have no other alternative but to purchase and redevelop existing land," Dillenbeck said.

"This project is a continuation of Union Pacific's long-term commitment to the growth of the community and the port," said UPRC President and Chief Executive Officer, Jack Messman. "It is a testimony to the excellent working relationship between the City and Port of Long Beach, Toyota U.S.A. and the Union Pacific Corporation."

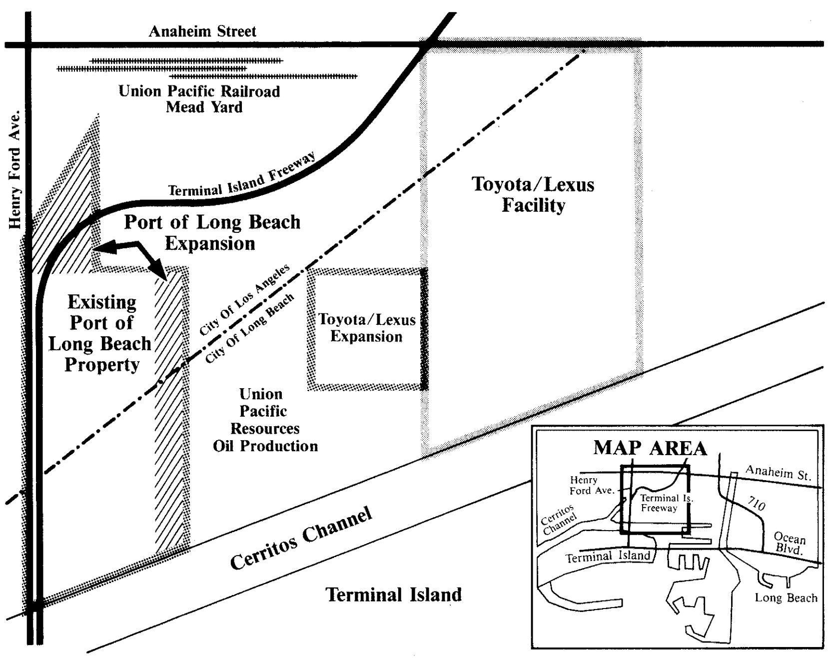
Box Count Soars – Faster, Higher, Stronger

In this age of supersonic travel, of transpacific crossings and lightning-fast technology, everyone in transportation, it seems, is adopting the Olympic motto: Citius ... Altius ... Fortius. Faster ... Higher ... Stronger.

And in a world that is three-quarters water, it is not surprising to find that the same adage applies to ocean shipping.

Over 75 percent of the world's cargo is moved via the sea, while 95 percent of US foreign trade moves this same way. So faster cargo delivery, higher levels of service, and stronger, more direct intermodal connections make for a world-class combination.

Pioneers in the art of moving cargo, Long Beach surpassed the bi-state port of New York/New Jersey in container count well over a year ago, assuming the nation's number two spot. Long Beach registered nearly 1.8 million Twenty-foot Equivalent Units (TEUs) during calendar 1991 on the way to setting a US West Coast tonnage record of 76.1 million Metric Revenue Tons (MRTs).



The surge in containerized cargo was a primary factor in propelling Long Beach to the top. Inbound box cargo rose almost 12 percent and exports soared nearly 17 percent over the twelve months prior, an impressive showing considering the state of the national economy.

The Port's container terminals had an outstanding year, spearheaded by the performance of Hanjin Shipping Company, which opened a 57-acre facility in the north harbor in March 1991. Maersk Pacific also was at the forefront of the growth curve, posting a double-digit increase.

Box counts are up significantly halfway through 1992, as all seven terminals strive to optimize capacity. An estimated 80† million tons of cargo will pass through the harbor this year in sea containers, including foods, electronics, automobiles, furniture, clothing and toys from around the world.

Week in, week out, more than 34,000 twenty-footers move through Long Beach. Much of this cargo stays in the local market-place of some 16 million people; however, roughly half the boxes depart for the East Coast, Gulf states and Atlantic seaboard via railroad land bridge.

In addition to funneling US exports to nations around the world, the Port of Long Beach is America's distribution pipeline for Pacific Rim and Far Eastern imports. Nearly 55 percent of all United States imports goods from the Far East enter through Southern California ports.

In fact, more than half the commerce moving between Asia and the New York metropolitan area passes not thought the Port of New York/New Jersey, but through the West Coast! The weak dollar continues to fuel the export surge, with raw materials cotton, scrap metal and coal joining finished products such as electronics, autos and medical equipment in the brisk Asian trade.

Last year, for the first time in history, more than 600,000 intermodal containers entered the eastern region from West Coast shores, reflecting what experts have known for more than a decade: the US trade scale remains weighted on the side of the Pacific Ocean.

The Port is not content to rest on its laurels; plans are in the works which will enable Long Beach to extend its 12-year reign as the West Coast's busiest harbor and tonnage leader.

Pacific Container Terminal will be reconfigured by mid-1993, adding 20 acres of storage space to its current total of 64. Maersk Line is opening a 107-acre, five berth facility on the Pier J expansion next February, just south of its present quarters. And California United and Hanjin are considering building on-dock facilities to speed cargo nationwide by rail.

The Port of Long Beach is committed to remaining the Southland's primary gateway for international commerce...pipeline to the Pacific Rim...and beyond!

(Port of Long Beach Interport)

First to Benefit from Tax Credit Legislation

"Users of our North Carolina Ports who pay North Carolina income taxes will be the first to benefit from tax credit legislation ratified today by the General Assembly," said Mr. P.A. Thomas, Chairman of the Board of Directors for the North Carolina State Ports Authority.

"And, the entire state of North Carolina ultimately will profit from this legislation through the additional revenues provided by the new business the ports will realize as a result of the tax credit," Mr. Thomas added.

The tax credit for businesses and individual taxpayers exporting through the North Carolina ports at Morehead City and Wilmington had been one of the key pieces of legislation sought in this session of the General Assembly by the North Carolina State Ports Authority.

Exporters earn tax credit on cargo exceeding what they sent over the North Carolina Ports in the previous two years. The excess of those fees for wharfage and handling paid directly or indirectly to the North Carolina State Ports Authority can be credited against the taxes due the state, up to 50 percent of the total tax liability and not to exceed $1 million per corporation or individual taxpayer. Any unused credit may be carried forward for the succeeding five years.

"Because exporters can get the tax credit only if they increase their use of the ports, the state should gain more in economic growth than the estimated annual tax loss of $400,000 to $600,000," Mr. Thomas said. "Our ports at Morehead City and Wilmington generate $57 million a year in state and local taxes."

Rep. Vernon Abernethy, R-Gaston, introduced the tax credit legislation in the 1989, 1990, 1991 sessions, and again in the current session. It passed the House of Representatives for the first time this session in late June. Final passage by the House occurred on July 16.

Senator Franklin Block, D-New Hanover, introduced the bill in the Senate, where it passed the first time this session on July 8. Final passage by the Senate occurred on July 16.

"Special recognition from the State Ports Authority goes to Representative Abernethy, who originated and has spearheaded the tax credit for state ports users from its inception," said Mr. Thomas. "We also recognize the significant role in the Senate afforded this legislation by Senator Block."

"Others deeply involved in the process surrounding this measure include Representatives David Redwine, Karen Gottovi, Hary Payne, Bruce Ethridge, Ron Smith; and Senators R.C. Soles and Beverly Perdue," Mr. Thomas continued.

"In addition to the many representatives and senators who voted in favor of the tax credit legislation, I extend a special thanks to the leadership in both chambers," Mr. Thomas said, "especially House Speaker Dan Blue; George Miller and Joe Hackney, co-chairmen of the House Finance Committee; David Diamont and Martin Nesbitt, co-chairman of the House Appropriations Committee; Senate President Pro Tem Henson Barnes; George Daniel, chairman of the Senate Finance Committee, and Marc Basnight, chairman of the Senate Appropriations Committee."

"Within the North Carolina Ports organization a special thanks is extended to the chairman and members of the governmental relations committees of the Board of Directors and the Ports Advisory Council," Mr. Thomas concluded.

(North Carolina Ports)

Groundbreaking for New Container Terminal

Colorful Shinto ceremonies marked groundbreaking for the Port of Oakland's new 33-acre Tra-Pac Terminal on September 17.

The $71.5-million state of the art facility on Oakland's Outer Harbor is the first new terminal to be built in Oakland since the Howard Terminal in 1982.

The Rev. Masato Kawahatsu of the Kanko Church of San Francisco blessed the site at the groundbreaking ceremony, following a welcoming address by Mr. James B. Lockhart, president of the Oakland Port Commission.

Mr. Lockhart noted that Oakland's trade with Japan accounts for 31 percent of its volume and that in the five year period from 1986 to 1991, Oakland exports to Japan were up 52.2 percent and imports 22 percent.

"I am confident," he said, "that this trade will continue its spectacular growth in the years to come, particularly in the light of the new terminal we are dedicating today."

Mr. Masanori Shono, senior managing director of Mitsui O.S.K. Lines Ltd., and Mr. Mitsuhiko Nakano, president of the Trans Pacific Container Service Corp., expressed their confidence that the new terminal would mean a substantial increase in container traffic between the Far East and Oakland.

It is a joint venture between Mitsui O.S.K. whose wholly owned subsidiary, the Trans Pacific Container Service Corp. will operate the terminal, and the Port of Oakland.

Under a unique financing arrangement, the Port will sell bonds to pay for the project and Mitsui will pay off the tax exempt bonds and guarantee them through a letter of credit. Thus, Mitsui will be able to achieve substantially lower financing costs than if it borrowed the construction money through traditional financing arrangements.

The agreement between the Port and Mitsui O.S.K. pledges Mitsui's involvement with Oakland for a minimum of 25 years.

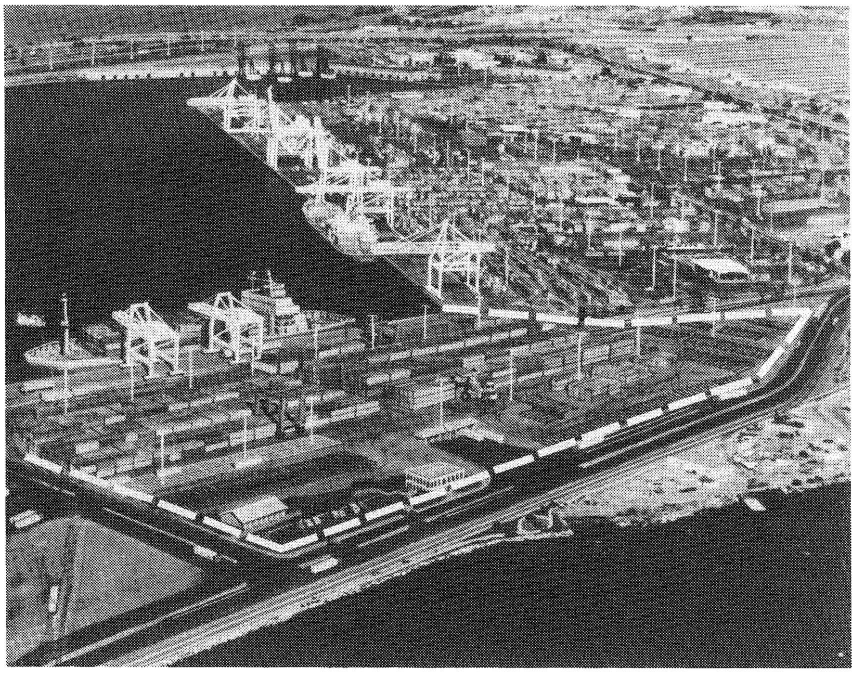
The terminal is located on the site of the historic Albers Mill, a grain mill that was later converted by the Carnation Milk Company to a manufacturing plant for dog and cat food. Carnation closed down several years ago and the Port reclaimed the property for maritime development. It is the last undeveloped Outer Harbor site on the Oakland waterfront.

The Port will pay all land infrastructure costs, estimated at $11.5-million. Mitsui will pay an annual rental fee equal to the annual debt service and an annual land rental payment. In addition, beginning the sixth year, Mitsui will be obligated to meet an annual tonnage throughput requirement, plus a percentage of wharfage charges on any shortfall.

Mitsui will furnish two container cranes at a cost of $15-million and pay some $45-million on terminal construction. The Port will then have the right to purchase the cranes at the termination of the agreement if Mitsui relocates elsewhere.

Canaveral Sand Berm To Renourish Beach

The entire eastern coast of the United States has a predominantly southern littoral drift of sand. This is a natural phenomena which is the result of tides



Port of Oakland Berth 30

Retouched photo showing artist's concept of new 33-acre (13.5 hectare) container facility to be built on the site of the former Carnation Company plant on the Oakland Outer Harbor Basin. The terminal will have one berth served by two container cranes. When completed in 1993, the new terminal will create, for the first time, a continuous, 2.75-mile (4.4-kilometer) quay for container operations along the entire Oakland Outer Harbor Waterfront.

and currents.

Port Canaveral's entrance channel acts as a tap to this migration of sand because it is deeper than the surrounding ocean bottom. Tidal currents wash some of this sand into the port. Consequently, the channel and portions of the port must be dredged regularly.

The Canaveral Port Authority has been investigating the potential of recycling pockets of good beach-quality sand found during maintenance dredging. Presently, maintenance dredging is being performed on five deposits of sand to assure proper channel depth. These pockets are located in three areas of the channel: just outside of the north and south jetties; east of the south cruise terminals; and adjacent to Jetty Park.

Research has shown the types of materials in these deposits. Core borings (deep samples of the ocean floor) were taken and show much of the top layers are good beach-quality sand. These pockets represent 30% to 40% of the total sand in the maintenance area. Nearly 95% of the sand in each pocket is good quality. Approximately 150,000-200,000 cubic yards of sand can be reclaimed.

Port Canaveral is using this sand to protect Brevard Country's beaches. Formerly, it was dumped offshore in an Environmental Protection Agency-approved disposal site six miles out to sea and lost to the beaches.

The dredging operation consists of a clam shell dredge and barges. The dredge loads the material into split hull barges. The barges are then hauled to the disposal site where they release the material by opening their bottoms.

In an innovative technique, a 2,500-foot-long sand berm is being constructed 2,000 feet offshore. The berm begins about four miles south of the port in Cocoa Beach. The berm cannot be built closer to the south jetty at Jetty Park because the sand would be washed back through the jetty and deposited again in the channel.

The port's engineering consultants predict the natural wave action will, over three to four months, erode the berm, washing the sand ashore and renourishing the beach.

The Florida Department of environmental Regulation has imposed a 24-hour, on-site monitor requirement during dredging to assure only good beach-quality sand is placed on the berm.

An on-site inspector, trained in the determination of sediment characteristics, is stationed on the dredge and decides which sand is good enough for the near shore berm and which material should be disposed at sea. The 24-hour watch also protects against the accidental taking of turtles.

The port authority has a unique opportunity to renourish Brevard County's eroding beaches. By the end of this project, the port will have spent almost a half million non-tax dollars.

In addition, the Canaveral Port Authority is planning a video of the operation which they intend to send to other Florida ports in hopes they too can help restore other beaches around Florida.

(Port Canaveral Journal)

Portland Group to Chiba Renews Port Friendship

In June, a nine-member delegation from the Port of Portland visited the Port of Chiba, Japan, renewing friendship developed during a 12-year sister port relationship.

Port of Portland Commissioner Elizabeth Flanagan lead the Portland delegation, which was comprised of Port personnel, executive of Oregon's Wheat Marketing Center and presidents of two local longshore warehousemen's unions.

Chiba, the largest volume seaport in Japan, together with the Port of Portland have cemented a strong relationship over the years by exchanging operational and executive personnel and information regarding trade and port operations.

A symposium, held aboard the Port of Chiba vessel, WAKASHIO, indicates a new direction for the sister port relationship. This three-hour seminar allowed staff from both ports to share in-depth information regarding port organization, structure, finance, business philosophy and public relations.

The symposium dialogue highlighted areas of challenge for the Chiba port staff. Issues such as the environment, developing a container port in Chiba and working with the community there were topics of concern. Future Chiba delegation visits to Portland will have the opportunity to tackle homefront problems such as these while addressing issues faced by their sister-port colleagues, all in a mutual learning and problem solving environment.

As a result of these mutually-beneficial annual encounters, the Port of Portland's relationship with the people of the port and prefecture of Chiba will continue to further Oregon's international business development with Japan. *(Portside)*

Seattle OKs Deal for Former Shipyard

The Port of Seattle Commission approved the final terms of a deal to acquire a former shipyard abutting one of the Port's major container shipping terminals. The site is considered one of the choicest on the U.S. West Coast for container shipping or other maritime uses. The agreement comes less than one year after the Port Commission approved changes to the Port's strategic plan for marine facilities (Harbor Development Strategy) by calling for possible conversion of the former shipyard site into a container terminal.

"We have structured an excellent deal for the Port, our community and our customers around the world. This prime maritime property has lain fallow for years and we intend to put people back to work on it as soon as possible. That's our mission," said Mr. Mic Dinsmore, Port Executive Director. "This is the largest property under single ownership in our container terminal development plan. We feel very good about our ability to assemble harbor area land as needed to keep Seattle in the forefront of international trade well into the 21st century," said Mr. Dinsmore.

The agreed purchase price for the approximately 33-acre Lockheed Shipyard #2 is $9 million. Of that total, $2 million will be set-aside in an escrow fund to pay for site clean-up as needed to comply with state and federal environmental laws. After extensive testing, the cost of clean-up is now estimated at between $0.9 to $1.5 million. Any funds left in the escrow account after the clean-up has been accomplished will go to the Port.

Also as part of the deal, the Port will take over as administrator of the clean-up process. According to Mr. Keith Christian, planning and development director for Port marine activities, "Port control of the clean-up, as opposed to an out-of-state company, gives us a higher degree of comfort and assures a faster development schedule. The past owner pays for clean-up, but we gain immediate control over its progress".

An environmental impact statement (EIS) encompassing the shipyard site and surrounding properties has been underway for more than a year. The EIS is jointly sponsored by the Port, the Washington Department of Ecology and the U.S. Army Corps of Engineers. By bringing these agencies to the same table, the Southwest Harbor Area EIS allows for a more comprehensive investigation of the issues. The EIS is examining the environmental differences between development alternatives for the site as a container shipping facility. The shipyard acquisition will also speed-up the EIS process.

The Port will see immediate revenue generation from existing and interim uses of the property. A portion of the site is already under lease to American President Lines (APL), lessee at the Port's Terminal 5 container facility located immediately south of the shipyard. APL is using the site as a marshalling area for empty containers. Vessel moorage at the existing piers will likely generate additional interim revenues. The transaction is scheduled to close on September 28, 1992.

S. Carolina: Mr. Royall Reelected Chairman

Mr. Robert V. Royall, Jr. was reelected chairman of the South Carolina State Ports Authority board as its July meeting in Charleston.

Mr. Royall, chairman and chief executive officer of NBSC Corporation and the National Bank of South Carolina, is now serving his eighth consecutive term as Ports Authority chairman. He was appointed to the Authority board in 1982 and re-appointed in 1989. He has served as chairman since 1985.

Mr. William L. Bethea, Jr., was elected vice chairman and Mr. Robert L. Selman, treasurer. Mr. Theodore B. Guerard was re-elected secretary.

Mr. Bethea, a Hilton Head Island attorney, previously served as treasurer. He was appointed to the board in March 1991.

Mr. Selman, president of The Keenan Company, Columbia, joined the board in September 1991.

Mr. Guerard, a Charleston attorney, has served on the Authority board since 1987 and previously served as treasurer.

Ports Authority board members are appointed by the Governor, approved by the State Senate, and serve seven-year terms. The Authority board elects its officers every fiscal year. *(Port News)*

Africa/Europe

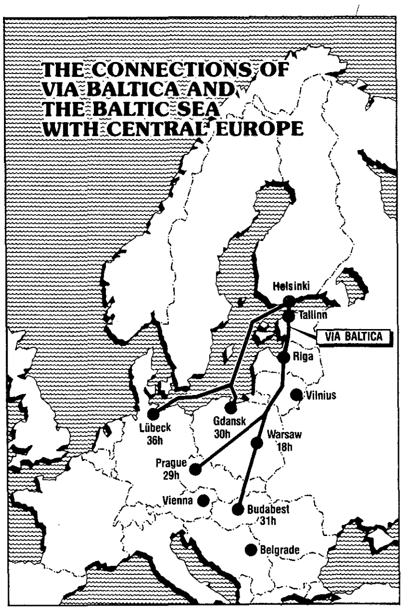
Helsinki, Central Europe Linked by Via Baltica

By Eljas Muurinen
Managing Director,
Port of Helsinki

The Via Baltica is a highway link from Tallinn through the Baltic States of Estonia, Latvia, and Lithuania to the Polish border and thence onwards to Central Europe. The intention is ultimately to link up wit the Trans-European North-South Motorway TEM in Poland and with the St. Petersburg regional traffic network in the North-East.

The ferry connection between Helsinki and Tallinn can be seen as a natural extension of the Via Baltica.

The road network in the Via Baltica



is in relatively good condition, but the overall infrastructure still requires considerable development.

Nevertheless, the development potential of this venture is substantial. The Via Baltica route will come to compete with lines to Germany and Poland, primarily in carrying traffic to and from Italy an Austria. As Western Europe's road networks become increasingly choked with traffic, the prospects become even more attractive, particularly on routes to South-East Europe, North Africa, and the Middle East. Transport times from Finland to the Eastern Mediterranean by sea are roughly twice as long as by land, which would also allow for daily connections.

The Port of Helsinki's geographical position relative to the Via Baltica is ideal. Finland has already a goods traffic potential of around 1 million tons annually, simply from the country's own traffic. The growth prospects for passenger traffic are also extremely favourable.

The attached figure presents transport times by road to a number of Central European cities. As a comparison, the map includes times to Lubeck and Gdansk by existing liner connections.

Helsinki – Tallinn Collaboration

The locations of these two capitals provide their harbours with excellent opportunities for cooperation. Among the issues that could be explored are:

- Promoting the Gulf of Finland as a regional centre for traffic and logistics services for markets in Fennoscandia, the Baltic States, and Russia.
- Marketing the port pairing of Helsinki & Tallinn as the leading regional supplier of harbour and logistics services
- Marketing the ports for serving transit traffic
- Development of passenger and cruise traffic

In conclusion, it can be noted that Tallinn is closer to Helsinki than any other major port or indeed any large centre of population. Hence both parties could be expected to benefit from cooperation, without the former Hanseatic opposition. Goods and passenger traffic between the ports has increased markedly already in the last few years, and can be expected to expand severalfold during the 1990s.

Vuosaari: Helsinki's New Cargo Harbour?

By Eero Leppänen
Technical Director,
Port of Helsinki

As in so many other old harbour cities, the present port quarters in Helsinki are finding themselves squeezed on all sides by expanding residential areas, and demands for the downtown harbour areas to be taken over for "better" uses are becoming increasingly insistent. Helsinki is more fortunate than many other metropolises, in that the city does contain a site that could house a general cargo port to meet future needs. In Vuosaari, a suburb on the eastern side of the city, there is a large area formerly used as a dockyard, on which it would be possible to build a new modern port capable of handling an annual general cargo throughput of some 10 million tons.

Provisional plans have been drawn up for the harbour, as a basis for decision-making. It is natural that there will be plenty of local opposition to the project, with opponents arguing that the new harbour will bring environmental drawbacks. There is also a "competing" harbour venture in the pipeline, put forward by private business interests. Before any final decision is reached, the location of the harbour will be subjected to a comparative study of the two alternatives under the auspices of the Ministry of Transport.

By early 1993 it is hoped that all the material required for decision-making will be available, and the City's political management will be in a position to delivery the final word on the future development of the Port of Helsinki. If the decision is a positive one, then it seems likely that Vuosaari will be open to traffic by the end of the century.

Bremerhaven: 48 Ft Containers to Canada

A new chapter in the evolution of intermodal transportation was written recently when the port of Bremerhaven loaded two fortyeight foot cargo containers destined for Montreal/Canada.

The containers built by "Rocon Containers" of Poznan, Poland, were

Two forty-eight foot cargo containers were loaded in Bremerhaven.

specifically designed for service within the north american railroad system.

The unique features include the ability to be lifted and secured, at intermediate points, by equipment with standard 40 FT ISO settings but at the same time offer comparable internal dimensions to standard domestic truck trailer equipment.

The buyer of A. M. containers, Mr. Alistar Donald, president of Marol International Canada, expressed his complete confidence in the quality of workmanship and praised the subsequent "economical positioning" of these units from Poland to Canada which was achieved through the coordinated efforts of Michael Jurens of Paul Günther GmbH Bremen, and their Canadian agent.

As stated by Paul Günther Bremen, it is anticipated that this is the beginning of the regular movement to meet the requirements of an expanding market in which Rocon plans to participate fully.

Gustavus Vasa's Vision: Founding of Helsinki

The Port of Helsinki — Finland's largest general cargo harbour has not emerged overnight, but reflects a history of gradual, orderly evolution over five centuries.

It all began in 1550, with a decree from the then King of Sweden-Finland, Gustavus Vasa, who founded the town of Helsinki at the marshy mouth of the River Vantaa to compete for the Baltic trade with the Hanseatic League's Tallinn, just across the Gulf of Finland. Nearly one hundred years later, the Governor General Per Brahe relocated the town and its harbour some kilometres further south, to what is now almost the centre of modern Helsinki.

It is 442 years since Gustavus Vasa's bold vision. Over this eventful and work-filled period, the Port of Helsinki has fashioned itself into what it is today — the biggest and most beautiful in the country.

Helsinki and its environs form the commercial hub of Finland. A million consumers live in the Greater Helsinki area, inside a radius of 45 kilometres from the Port Eight million tons of the country's foreign trade passes through the harbour annually. This accounts for some 70% of the nation's seaborne goods traffic. We are clearly the largest port of entry for general cargo imports, and our container handling know-how is based on two decades of experience in the field. In addition, Helsinki is far and away the country's largest passenger harbour.

The Port of Helsinki is known internationally as an efficient and reliable partner. A high level of technology and a skilled workforce see to the tasks of harbour planning and development and cargo handling & storage in a manner that has won us an enviable reputation for service. Our position is further strengthened by the structure of the regular liner connections through the Port. Just to take one example, Helsinki can boast more than a dozen sailings to Germany each week.

The Port's finances are also on a sound footing. In 1991 total Port Authority revenue was FIM278,2M, and expenditure FIM248,5M, the result was FIM29,7M and providing a financing surplus of FIM103,8m.

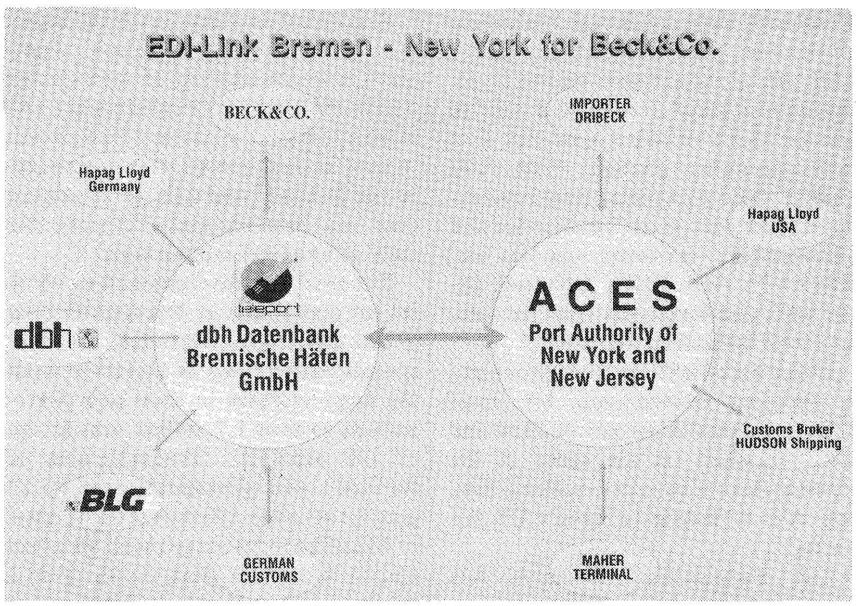
According to our charter, the Port of Helsinki Authority is a municipally-owned commercial enterprise providing facilities for customers engaged in foreign trade. It offers competitive harbour services, primarily in the fields of general cargo and passenger traffic.

(Port of Helsinki Handbook 1992)

Bremen — New York EDI Announced

A new maritime cargo communication link has been established between the Ports of Bremen/Bremerhaven and the Port of New York/New Jersey. The electronic data interchange system (EDI) which unites the New York/New Jersey Automated Cargo Expediting System (ACES) and Bremen/Bremerhaven's Teleport Bremen is expected to reduce both time and cost in transmission of documents.

"This new electronic linkage uniting the two telematic hubs, significantly strengthens the relationship between our two great port," said Mr. Uwe Beckmeyer, Bremen's Senator for Ports, Shipping and Foreign Trade. "Our combined capabilities matched by this new dimension in communication technology, will offer customers unprecedented service."



Said Mr. Richard Leone, Chairman of the New York/New Jersey Port Authority, "International linkages among trading communities provide an advantage to our port customers by expediting information flow among trading partners."

Among the first users of the international linkage is Beck & Co., a leading exporter of beer. Other firms in the transportation chain include Bremer Lagerhaus-Gesellschaft (BLG), the operating company for the Ports of Bremen/Bremerhaven; Hapag-Lloyd, the ocean carrier for Beck & Co; Maher Terminals, the terminal operating company in the Port of New York/New Jersey; Hudson Shipping, a customs broker; and Dribeck Importers, the US importer of Beck's.

"This is the first time these two telematic systems have been linked, enabling information from origin to destination to flow electronically through an entire chain of companies," said Ms. Lillian Liburdi, Director of the Port Department of the New York/New Jersey Port Authority. "With the participation of each company involved in transporting cargo, the full benefits of time and cost savings may be realized. Three-quarters of a million metric tons of cargo moves between our two ports each year, and the new cooperation can help shippers expedite the movement."

Mr. Hans H. Poehl, Deputy Chairman of the BLG Executive Board, explained that in coordination of logistics, "the transport of goods from shipper to consignee requires the transmission of detailed shipping documents among all the companies in the chain. Before EDI critical information had to be repeatedly updated, typed, and sent to one or more of the companies — a time-consuming process. With EDI linking these two major port communities, information can be amended and electronically conveyed quickly and effectively. Accuracy is enhanced, paper work and transmittal time reduced, and staff utilization improved."

Citing the efficiencies and advantages of paperless transmission, Mr. Josef Hattig, General Manager of Beck and Co., remarked on the speed of the transmission of invoices, packing lists, and bills of lading to Beck's US importer.

The inauguration document was signed at a ceremony which took place at the Port Authority of New York/New Jersey's headquarters at the World Trade Center in New York on September 11, 1992.

Successful First Half '92 For Port of Amsterdam

Quantities of goods transshipped in the Port of Amsterdam rose substantially again in the first half of the current year. This is a continuation of the upward trend achieved over recent time. Port Management's figures for the first six months show that 17.5 million tons of goods were transshipped in total; an increase of 11.5 percent over the first half of 1991. Derivates/cattle feed, fertilizers and phosphates, coal, sand, gravel, iron and steel were especially successful.

It was especially the transshipment of dry bulk goods that recorded top figures with an increase of over 39 percent to 10.6 million tons. The transport of containers grew 9.1 percent to over 490,000 tons. General cargo transshipped in the first half of this year as was down 11.4 percent to 1.3 million tons. Half year figures for liquid bulk dropped 15.4 percent to 5.4 million tons, despite a slight rise in June. The number of ships calling on the Port of Amsterdam rose again in the first half of '92 with 2,556 vessels carrying gross tonnage of 19.9 million as compared with 2,526 vessels in the first half of 1991 with a gross tonnage of 17.5 million.

Dry Bulk

Arrivals of derivates/cattle feed rose, partly due to the introduction of new services to Amsterdam. In total almost 3 million tons were transshipped; a rise of no less than 41.8 percent. The growth in coal transshipment also continued. In the last half year 17.6 percent more coal was transshipped, bringing the total to almost 4 million tons.

The sand and gravel companies, witch set up operations in Amsterdam only a short tie ago. expanded activities considerably. This is apparent from the large increase in sand and gravel arrivals to over 1.7 million tons (a rise of 240 percent). Transshipment of fertilizers and phosphates rose by 22 percent to over 520,000 tons. A total of 412,000 tons of scrap metal and steel passed trough the port, a rise of 43.2 percent compared with the same period last year.

Liquid Bulk

The transshipment of liquid bulk goods in the last half year fell by 15.4 percent to 5.4 million tons. But in June oil products in particular booked a slight increase. In total over 4 million tons (—18.1 percent) in oil products were transshipped. For crude oil the figure was 496,000 tons (—21.9 percent). The transshipment of molasses rose by 21.6 percent to 493,000 tons.

General Cargo

The amount of general cargo handled in Amsterdam over this period fell by 11.4 percent to 1.3 million tons. This was particularly the result of several exceptional circumstances in the first half of last year — such as coping with one-off events (unit loads and military equipment for the Arabian Gulf area), shifting scrap to the category dry bulk, and a fall in transport to Eastern Europe. In contrast, the number of containers handled in this sector grew by over 9 percent to more than 490,000 tons. The transshipment of cocoa shipments to the former Soviet Union.

Finally, thee was a decrease in roll-on/roll-off transport. In this sector 465,000 tons were handled in Amsterdam (—10.3 percent). There has been a shift in the market — less transport on the northeast Asia route and fewer arrivals from the EEC.

Executive director of Amsterdam Port Management, Mr. Godfried C.G. van den Heuvel, is happy with these half-year figures. "We will have to put more work into some sectors, but if the current trend continues in the second half of 1992, then progress in the port of Amsterdam will be satisfactory this year".

Hamburg Important Port For Czechoslovakia

There have been trade links between Czechoslovakia and Hamburg since the early Middle Ages. Before the Second World War some two thirds of non-local cargoes handled by the Port of Hamburg came from Czechoslovakia, eastern Germany, Hungary and Southern Poland. Since the 1920s there has even been a bit of Czechoslovakia in Hamburg — 30,000 sq.m. of land at the Moldau- und Saalehafen over which Czechoslovakia was granted territorial jurisdiction by Article 363 of the Versailles Peace Treaty. A transit cargo handling centre for Czechoslovakian inland-waterway traffic was established on the land. So despite the considerably lower volume of trade in the post-War period there was no permanent break in trade relations between Hamburg's port economy and Czechoslovakia's foreign-trade firms, state-run shipping company and traffic carriers.

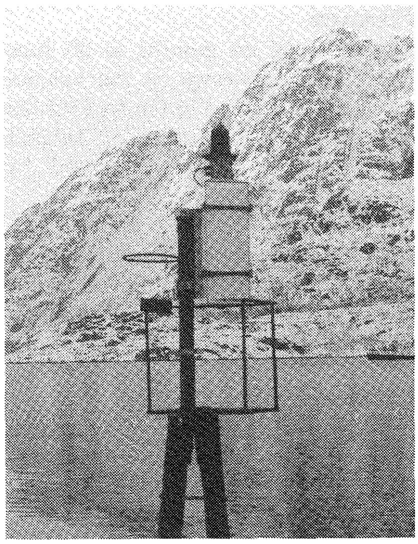
Located at the crossroads of key transport and trading routes, Hamburg is Czechoslovakia's most important overseas port. The total volume of transit cargo handled amounted to some 1.2 m t in 1990. In 1991 it is estimated to have risen a further 10%. The main goods to pass through the Port of Hamburg on their way to Czechoslovakia were oil-seed cake, raw phosphates, phosphoric acid and tropical fruits. Czechoslovakian exports were mainly malt, steel plate, plastics and machinery.

Despite the current fall in production, the introduction of free-market reforms will lead to closer ties between the Czech and Slovakian economies and the world economy and thus to closer international trading links. In the medium to long term, Hamburg reckons with a considerable growth in trade to and from this region. So Hamburg is now well on the way to regaining its pre-War position as the prime port for overseas trade from Eastern and Southern Europe.

Hamburg's competitive position is strengthened by good rail links (now with point-to-point scheduled freight trans) and a new joint venture, the Eurokai Czechoslovakia Terminal at the inland port of Melnik. The tariff-kilometre distance from Hamburg to Prague is only about 700 km, and to Bratislava only about 1,100 km. The Port of Hamburg is also giving its full support to plans to increase the cargo-carrying capacity of the Elbe and Moldau. Germany's high level of investment in Czechoslovakia (over 50% of all foreign investment) could also prove favourable to the Port of Hamburg.

Norwegian Order for Lanterns from Tideland

The Norwegian Coast Directorate has placed a large order for marine lanterns and spares from Tideland



Signal Ltd. the Surrey-based specialists in aids to marine navigation.

This is the latest in a series of contracts won by Tideland Signal and it covers the supply of 100 ML-155 and eleven ML-300 lanterns, spare lenses and electronic components. All the lanterns have TF-3B flasher/lamp-changers and are fitted with Tideland's new "Omnibus" timer card, which enables them to accept input voltages of up to 36V and provides a capability for remote monitoring and control.

The "Omnibus" timer card employs pulse width modulation techniques to maintain a constant power level to the active lamp filament, regardless of fluctuations in the primary input. It takes a stable precision voltage as a reference in order to perform a true second-order correction algorithm for accurate regulation. This method minimizes power consumption and greatly extends lamp life because the lamps are never continuously subjected to rms voltages above the rated levels.

Lisbon: Special Program For Receiving Schools

Since the port of Lisbon is acknowledged as being an important centre of varied operational vitality — which covers not only port services themselves, but also various activities connected with local and regional activities, such as trade, industry, tourism and water sports — the Authority of the Port of Lisbon has developed a special program for receiving schools and cultural associations.

In point of fact in recent years, there has been a significant increase in the number of visits paid by students from various degrees of education to the Port of Lisbon. Over 1,300 students from different parts of the country visit the port of Lisbon every year.

The interest that the various teaching institutions have shown in getting to know more about the country's main port which is a kingpin in the national economy, through the visits that have afforded them more information about the different aspects of port activity, is a fact that the Authority of the Port of Lisbon is pleased to place on record.

More and more requests are being received from different age groups who have expressed interest not only in the activity of the port as an important feature of world trade but also in the artistic heritage of the organization which includes the magnificent Alcantara and Rocha do Conde de Obidos Passenger Terminals whose central halls were decorated by Almada Negreiros with outstanding frecoes that are often the subject of special studies by students of the Fine Arts and Architecture.

However, it is mainly the younger visitors who have prepared illustrated essays on the port of Lisbon freely and spontaneously, expressing the ideas that they have formed of the port itself: on either side of the Tagus with its beautiful estuary and all the equipment that enables it to handle over 17 million tons of cargo. Such enthusiasm is clearly visible in the drawings that have been sent in by the schools.

Considering the growing importance of these visits, on the 9th and 10th of May last, the Authority of the Port of Lisbon organized and exhibition of drawings done by children along the river bank, during the year they had visited the port of Lisbon. Special mention should be made of the work submitted by the Sport Algese Dafundo School, the Sacred Heart of Mary Private School, the Alhandra Association for Social Development, the School run by the Society for the Promotion of Education and the Penafirma School.

Several children and even senior citizens visited the exhibition where there were tales and material for children who wanted to draw.

This event attracted several dozens of children and the Authority of the Port of Lisbon made the most of an area which had hitherto been unused, on account of the new demands of the shipping lies, but which appears to be ideal for pleasure and cultural activities, so that plans are already in hand to convert the embankment between Santos and Santa Apolonia for this purpose.

(Porto de Lisboa)

ABP Holdings Plc 1992 Interim Results

Financial Highlights:

- Pre-tax profit of £15.1m (1991: £31.7m)
  - Ports and Transport: £37.6m (1991: £39.6) before charging severance costs of £2.0m (1991: £0.3m)
  - Property Investment: £11.2m (1991: £10.1m)
  - Property Development: loss of £1.6m (1991: profit of £4.8m)
  - Property Development Provisions: £10.0m (1991: £5.0m)
- Interest charged to Profit & Loss Account: £20.1m (1991: £17.5m)
- Earnings per share: 5.7p (1991: 12.0p)
- Interim Dividend: 325p per share (1991: 3.1p per share)
- Net Balance Sheet borrowings at 30 June 1992: £348.0m (31 December 1991: £332.0m)
- Off Balance Sheet borrowings at 30 June 1992: £14.0m (31 December 1991: £26.0m)
- Gearing: 56% (31 December 1991: 55%)

Summary of Results

Profit before tax for the first half of 1992 was £15.1m (1991: £31.7m) after providing L10.0m (1991: £5.0m) against reductions in the value of trading properties within Grosvenor Square Properties (GSP) and £2.0m for severance costs. Earnings per share were 5.7p (1991: 12.0p).

Ports and transport operations, before severance costs, contributed £37.6m (1991: £39.6m) on a turnover of L93.2m (1991: £92.5m). Income from property investment was £11.2m (1991: £10.1m). Property development activities, before provisions, resulted in a loss of £1.6m (1991: profit of £4.8m). Net interest payable was £20.8m compared with £27.6m in 1991, of which £20.1m (1991: £17.5m) was charged to the profit and loss account. Interest capitalised was sharply reduced at £0.7m (1991: £10.1m).

Finance

During the six months to 30 June 1992, net borrowings on the balance sheet increased by £16.0m to £348.0m and the Group's share of off balance sheet net borrowings decreased by £12.0m to £14.0m.

Shareholders' funds, adjusted to include a noted excess of the valuation of operational land over book value, increased to £617.0m (31 December 1991: £609.0m).

Dividend

In view of the underlying strength of the business, the directors have declared an interim dividend of 3.25p per share (1991: 3.1p per share). It will be paid on Wednesday, 4 November 1992, to shareholders on the register at Friday, 2 October 1992.

Commenting on Group results, Sir Keith Stuart, Chairman, said:

"The continuing recession in the UK economy has inevitably had an adverse impact on Group results particularly in the property development business. Although the recession has also affected some of our ports activities, the potential of our ports business remains strong."

Ports and Transport

Total tonnage handled in the first half rose by 1.4m tonnes to 53.0m tonnes, the principal changes being a reduction in the volumes of construction materials and vehicles, offset by an increase in some bulk trades. Although this change in the mix of the business led to lower average margins, the contribution from the ports and transport business, excluding severance costs, was broadly similar to that achieved in the second half of 1991.

Several important commercial developments have taken place during the first half of 1992:

At Hull, ABP has entered into a long-term agreement with North Sea Ferries for the development of the port's first riverside roll-on/roll-off berth.

At Southampton, port capacity and utilisation are being improved through a series of investments. In June 1992, Geest Industries signed a contract with ABP to use the port for all its banana imports. The move from the port of Barry has been necessitated by Geest's expansion into Europe and the increased size of the new vessels which Geest will introduce in 1993. Southampton's roll-on/roll-off facilities are also being upgraded to allow the port to handle larger and heavier freight cargoes.

At King's Lynn, the general-purpose Riverside Quay was opened in June this year, enhancing the port's competitive position by doubling the size of ship able to use the port.

ABP's interest in the container-handling sector was strengthened by the acquisition in May this year of a 49% stake in Tilbury Container Services Limited (TCS) from P & O Containers Limited.

Property Investment

Commenting on the increased contribution from property investment income, Sir Keith said: "Port estates continue to attract a wide range of industrial and commercial businesses, leading to a rising rental income."

In a highly competitive market, the Group has also been able to secure further lettings in several of its investment properties outside the ports, including 45,000 sq ft of offices at St Martin's Lane, London.

The sale of London Pavilion by a 50%-owned associated company during the first half of the year reduced the Group's off balance sheet borrowings by £12.0m.

The annual valuation of the Group's investment portfolio, which predominantly consists of land at the ports with a rising rental income, will be carried out at the end of the year by Healey & Baker, and any surplus or deficit will be reflected in the balance sheet for 1992.

Although a formal valuation of all the Group's properties was not carried out at the half year, the Company has been informed by Healey & Baker that, in their view, there has been no overall material change in the value of the investment portfolio since 31 December 1991.

Property Development

The Company announced in a press statement on 16 July that, following the Company's half-yearly review, a provision of £10.0m has been made against the fall in the value of Grosvenor Square Properties' (GSP) trading properties since the end of 1991. After making this provision, the book value of property developments at 30 June

1992 was reduced to £124m.

"The extent to which further provisions may be necessary in the full year accounts will depend upon market conditions at the end of the year," Sir Keith commented.

Construction work on the Group's property development progamme outside the ports is now largely complete, and good progress is being made in the further development of the Group's extensive land-holdings at the ports.

The most recent lettings achieved outside the ports include a 71,500 sq ft office building in Bracknell and 21,000 sq ft of offices—part of a 117,000 sq ft campus office development - at Denham.

At the ports, major developments are in hand at Cardiff. Construction of a 150,000 sq ft office block on the Capital Waterside site, pre-let to the Welsh Health Common Services Authority, has begun. Heads of terms have been recently agreed with Dutch-owned NCM Credit Insurance Limited to lease a new 115,000 sq ft office development to be built on an adjacent site at Cardiff Bay, for occupation in late 1994.

Prospects

Commenting on future prospects, Sir Keith said:

"Prospects for the rest of 1992 are inevitably clouded by the general state of the UK economy which currently shows no sign of improvement. Based on revenues in July and August, our ports and transport business is unlikely to produce better results in the second half of the year than those in the first six months.

"Income from property investment is on a rising trend, and we are making useful progress in letting some of our completed developments. Until we achieve further sales of properties, however, the cost of interest on borrowings will remain high.

"In the longer term, we remain confident that the Company is in good shape to take advantage of any improvement in the trading environment."

Port of Barrow Opens New Dock Entrance

Associated British Ports' (ABP) port of Barrow-in-Furness celebrates its 125th anniversary this year when The Lord Cavendish of Furness, DL inaugurates the port's new Ramsden Dock Entrance on Tuesday 15th September.

The inauguration ceremony is the highlight of the port's anniversary and will be attended by Stuart Bradley, ABP Managing Director; the Mayor of Barrow, Councillor Mrs Joyce Fleet BEM; the Mayoress, Mrs Phyl Palmer; Bob McCulloch, Chief Executive of Barrow Borough Council, along with representatives from the M.D.O., VSEL, BNFL, British Gas and other important local figures.

The 11.30 a unveiling ceremony will be performed by Lord Cavendish, whose ancestors were present at the original ceremony in 1867, and will be followed by a trip on The Isle of Mann Steam Packet Company ship, *The Lady of Mann*.

The new port entrance and deep-dredged approach channel have taken about two and a half years to complete and have been designed to meet the entry/exit requirements of the Vanguard class of submarines; the new facility will also enable the port to handle larger vessels. The Monk Ballast Nedam Joint Venture was responsible for the construction of the new entrance.

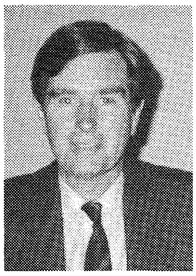
Captain John Green, Port Manager, ABP Barrow, comments:

"The Devonshire Dock was opened in 1867 and we believe our 125th anniversary is a very significant date. The port continues to play an important role in the community."

The 125th anniversary will also see local Barrow school children participating in a writing and arts competition.

Asia/Oceania

Mr. Hirst AAPMA Executive Director



The Association of Australian Ports and Marine Authorities has announced the appointment of Mr. John Hirst as its Executive Director to succeed Mr. Peter Brown who had announced his retirement from that position.

Mr. Hirst who is 50 years of age holds a Bachelor of Commerce in Economics and has many years experience in senior positions in industry.

Through his involvement in industry he has had extensive experience in negotiated and administration involving the transport area.

In announcing his appointment the new President of the AAPMA Mr. Hedley Bachmann said he was looking forward to working with Mr. Hirst on the challenges facing Port and Marine Authorities throughout Australia.

Best Landbridge Option From SE Asia, Europe

An independent study has named Fremantle as Australia's best option as a national gateway for landbridging from South-East Asia and Europe.

The study, by Melbourne-based consultants Thompson Clarke Shipping, found there were opportunities for sea-road or sea-rail operators to offer profitable services based on Fremantle as a port.

It estimated that up to 45,000 containers a year could be landbridged between the west and east coats through Fremantle.

The study — Fremantle Land Bridge Project — was announced by Prime Minister Paul Keating on his visit to the Port on June 30.

West Australian Minister for Transport Pam Beggs said the study reflected a commercially-focussed approach and its estimates were probably nearer the mark than the more speculative estimates that had been made in the past.

"The Government insisted throughout the study that the consultants emphasise the commercial realities and it is clear they have followed that instruction," Mrs Beggs said.

"The study is a basis for the commercial strategies of the Government agencies that inevitably will be involved in landbridging. These include Fremantle Port Authority, Westrail and the National Rail Corporation.

"It further builds on the commitment to landbridging outlined in the State Government's strategy, the WA advantage and shows it is a realistic and worthwhile objective with economic benefits for Western Australia," Mrs Beggs said.

Mrs Beggs said the port's existing and planned infrastructure could handle landbridging up to 45,000 containers a year. *(Fremantle Port New)*

News from the Port of Pusan

4th Phase Development Project:

The 4th Phase Development Project was started in February 1992, comprising the construction of new container terminal at the north outer harbor in Pusan. The Project has been invested by the Korea Container Terminal Authority.

With the completion of the project in 1996, the new terminal will handle 1.2 million TEUs of containers annually, and accommodate four 50,000-ton post panamax class container ships simultaneously. The terminal facilities include 1,400-meter quay with 15-meter water depth and 9,000sq meter CFS on 750,000sq meter of total terminal area.

Modernization of International Passenger Terminal

On the 40,000sq meter of total area, the thirty floor terminal building will be equipped with convention center, hotel, leisure facilities and etc. Passenger Terminal and CIQ(Customs, Immigration and Quarantine) offices will be located on the basement 1st and 2nd floors. The terminal will have 687 meter quay and 3 berths for three 10,000-ton class ships and 2 berths for 500-ton class hydrofoils.

The investment for the Terminal facilities made by the Government and private sectors will amount to US$253 million.

The $Nil Wharfage Port! – Port of Geelong

The Port of Geelong Authority is attracting nationwide industry attention as a result of implementing a fully user-'pays' pricing structure from July 1, 1992.

The move away from the traditional wharfage charge on shippers to a charge on berths and channels related to the cost of providing and operating them was a major recommendation of the landmark 1989 Interstate Commission into Waterfront Reform.

The Authority is believed to be the first port authority in Australia to accept the controversial challenge. The revenue-neutral scheme, which will feature incentives to attract smaller bulk and general cargoes, will not only assist importers and exporters of products through substantial transport cost reductions, but will also enable the authority to completely match revenue against its cost centres. Instead of levying general wharfage charges against shippers — involving the traditional cross-subsidisation between users to absorb obvious losses — the new equitable system imposes the true costs of operating facilities directly on commercial users.

The move has drawn enthusiastic support from the Australian Peak Shippers Association and Australian Shipping Users Group (ANUG), who have described it as "demonstrating a management commitment to genuine efficiency".

According to ANUG Executive Secretary, Ron Knapp: "Geelong has moved in the right direction; shippers will be able to see exactly where the costs have been generated and can take up the issue with the owners/operators. "Now the lines and terminals will have to pressure port authorities to justify their charges, because shippers will be in a position to negotiate over the rates they pay and the bill they receive".

(Portside)

1st Pile of NBCT Project Launched: Penang

The Minister of Transport, Malaysia, Y.B. Dato' Seri Dr. Ling Liong Sik urged Penang Port to continue to remain competitive and highly efficient if it were to be developed into the hub port for the Bay of Bengal Region.

Speaking at the launching ceremony for the first pile for the construction of the M$300 million North Butterworth Container Terminal (NBCT), the Minister said that the project will fulfill the needs of the trading community in this region and further boost the economic growth of the country.

He said that the Government is fully aware of the needs of the port users and will therefore continue to develop improved port services as a contribution towards the national vision and aspiration to be a developed nation by the year 2020.

"Towards this end, the Government has allocated M$768.6 million under the Sixth Malaysian Plan t upgrade the infrastructural facilities in all Federal Ports. This amount is 7.1% of the total allocation for the upgrading of infrastuctural facilities in the transportation sector," he said.

"This Government is now implementing policies and programmes aimed at upgrading the ports to provide better services, reduce transportation costs and enable the ports to compete with others in the region," he added. He urged PPC and all ports to avoid parochialism as the hinterlands of ports today extend beyond state, national and regional boundaries in terms of trade.

Some 300 guests comprising Board Members, senior Ministry of Transport officials, Port Consultative Members, port users and press were invited to the ceremony. Also present to witness the ceremony was Y.B. Dr. Hilmi bin Haji Yahaya, Penang State Executive Councillor who is also the Penang State Infrastructure and Public Utilities Chairman.

The second package of the NBCT project i.e. construction of wharf and access bridge has been awarded to Gamuda Bhd. for a contract sum of M$80.99 million.

The new container terminal when completed in early 1994 has the capacity to handle 238,800 TEUs per annum. By then, the Port of Penang will have a total capacity to handle 482,500 TEUs per annum. *(Berita Pelabuhan)*

Ports of Auckland Best Year Since 1988

Ports of Auckland Limited has recorded its best year since its formation in October 1988.

The company made a trading profit, before deducting restructuring expenses and tax, of $26.7 million on shipping and cargo volumes which have increased despite the difficult trading conditions.

After deduction of $8.5 million of restructuring costs the pre-tax profit was $17.67 million, up 17% on the previous year. The after tax profit was $11.34 million.

The company's chairman, Mr. Graeme Alexander, said the company has consolidated its position as the country's premier port, handling 60% of the country's imports and 28% of all exports, by value. Ports of Auckland handles more than half of the country's total container trade.

Major restructuring has produced continuing increases in productivity and efficiency, with many of the gains being passed on to customers in the form of lower charges. The company's annual operating expenses are now, in real dollar terms, 44% below the level they were in the last year of the former harbour board, despite an increase of 20% in the volume going through the port.

"In the year under review we handled 6.9 million tonnes, a 20% increase on the tonnage handled by the harbour board in its last year of operation. The volumes of goods handled by the company has increased at the rate of 4.4% per year," says Mr. Alexander.

"The return on investment n port facilities and operations in the year was 13% and 4% on port properties, giving a total company figure of 7% after restructuring costs. This is regarded as satisfactory in the circumstances.

The company has paid and provided for dividends to the shareholders of $4,535,000 which represents 40% of the after-tax profit.

"Port reform was all about improving New Zealand's competitiveness in international markets and Ports of Auckland limited has been determined to play its part in assisting exporters and importers. Revenues have fallen as a result of our policy of reducing average port charges by at least 10% over our first two years, and we achieved this goal well within target.

During the June 1992 year we announced a 15% reduction in receiving and delivery tariff charges, a move which we estimate will save customers some $500,000 on an annual basis.

"Our increasing efficiency and productivity, reflected in charges to customers, have enabled the company to more than hold its own in a very competitive market, increasing its market share of both exports and imports and attracting trade from as far away as Manawatu, Wanganui and the South Island.

Effective from 1 May 1992, the restructured company consists of a corporate office and three operational units — operations, plant services and port property.

"During the year we installed and commissioned a new 'State of the art' large container crane at the container terminal, providing the port with a five crane, three berth facility. The German builders awarded the construction contract to our plant services division, and in a further demonstration of our international competitiveness, our plant services team won two contracts assembling large Finish straddle carriers for a Danish company's operations in Taiwan".

"We also installed a new computerised container management system at the terminal.

"Agreement has been reached with New Zealand Rail Corporation for the acquisition of railway land south of Quay Street to provide an area where we can establish a rail exchange grid for the receipt and delivery of cargoes by rail.

"All of these improvements will lead to further increases in productivity, to more intensive use of existing assets, and further defer the need for capital investment in new wharves and port operational infrastructure.

The company continued to actively develop appropriate port property for interim alternative uses in the short to medium term, and is an active developer on the Auckland waterfront. This included establishing the new maritime museum on Hobson Wharf, and the re-development of devonport wharf as a major retail complex with new ferry passenger terminal, due to open in October 1992.

Mr. Alexander said, "There are times when safety concerns preclude public access to port operations, but there are still plenty of opportunities for the public to see the port. Presently there are no less than eleven restaurants, cafes and bars on port land, and at least three more are planned".

"We remain hopeful that economic recovery will eventually enable the planned major redevelopment at princes wharf to proceed.

Further progress was made during the period with the proposed 255 berth extension of Westhaven Marina, due to begin early next year, and of the proposed redevelopment of the viaduct basin.

"The company is well placed for the future with a management and staff committed to customer service and the flexible capability of working the port 24 hours per day. This will make the most intensive use of the company's assets while giving the best possible service to the company's clients," said Mr. Alexander.

PSA Awards Contracts For 10 Quay Cranes

The Port of Singapore Authority (PSA) has awarded a $97,508,220 million contract to Noell GmbH and Samsung Co Ltd, for the design, construction, delivery, installation, testing and commissioning of 10 units of container handling quay side cranes for Brani Terminal. Six post panamax quay crane will be supplied by Noell GmbH at S$ 61,409,000, while Samsung & Co will delivery four post panamax quay cranes at the contract sum of S$36,094,220.

The contracts were signed between CDRE (Res) James Leo, Executive Director, PSA and Mr Josef Rossmanith, Managing Director, Noell GmbH as well as Mr Kim Moo, Vice President of Samsung Heavy Industries at PSA Building on 8 Sep 92 at 12.00 noon.

These 10 units quay cranes will be delivered progressively in 1993. At present there are 8 quay crane working on the two newly completed main berths. When Brani Terminal is fully completed in 1994, there will be 31 quay cranes serving five main and four feeder berths to cater for the growth in container throughout of up to nearly four million TEUs.

All the cranes will be equipped with the electronic antisway system, crane management system and computer-aided operating system. These cranes will be also linked through fibre optics to the Brani Terminal Engineering Department workshop where the crane performance is being monitored and problems can be identified on the control screen. With these features, PSA hopes to achieve higher productivity in container handling and be able to meet all its customers' needs efficiently and reliably.

New Computer Systems For Speedier Handling

Ports of Auckland has moved another step forward in the technology field with the introduction of new computer systems to further speed container cargo movement, ship loading and unloading, ship stability and stress calculations, yard and stack planning and a host of other related functions.

It is a major expansion of computer technology, building on the company's successful ACIS system which has operated at Fergusson Container Terminal since the mid 70s.

The technology has been developed by a California-based software engineering company, Navis Corporation, and has quickly gained acceptance in many ports, including Oakland, Hong Kong, Tacoma, Los Angeles, Kaohsuing, Kobe, Yokohama, San Pedro, Seattle, Vancouver, and soon New York, Sydney, and other Australian ports.

The system, known as SPARCS (Synchronous Planning And Real Time Control System) is integrated with the ports existing computer. From this central system, all of the necessary container inventory information and data is translated to the PC workstations on which vessel and yard planning is carried out.

The workstations use "user friendly" menus and windows, with high resolution colour graphics, with a simple "point and click" mouse, which reduces training time. Operators visualise containers on board or in the yard, and plan and execute movements on the screen, with the computer system displaying the results of those moves.

Functions carried out by SPARCS include the development of vessel load and discharge plans, work sequences and yard allocation, ship stability and stress calculations, and the production of reports used in carrying out operations and the "real time" direction of operations via mobile data terminals.

The real time control option has been taken up by Ports of Auckland Ltd. who have installed LXE mobile data terminals in the 26 straddle carrier fleet for the control of road and rail container receival and delivery, and ship load and discharge.

Once a container's details have been entered at the terminal gate, they are automatically transferred to SPARCS, which then decides where that container should be placed within the yard and which straddle carrier is to carry out the movement. The system transmits a work instruction to the mobile data terminal within the chosen straddle carrier. All the deliver has to do is acknowledge the move. A similar process occurs when vessels are unloaded.

The goal is to optimise the productivity of straddle carriers, as well as to facilitate overall terminal control. Time savings in communication occur, and empty moves by straddles are minimised.

The system has been considerably enhanced for the Auckland operation. In all other port locations, the system is used for single operator terminals, but in Auckland, it has been adapted for multi-user application, which makes the New Zealand operation, to date, unique.

The Navis system has been supplied direct to Auckland by the developers, and General Automation NZ Ltd have supplied the LXE installation, with two RF base stations, 26 mobile terminals in the straddle carrier cabs, and hand-held terminals for controller sand other terminal staff. It's successful introduction has been a result of co-operation and combination between the suppliers, the Port's own information services staff, and cargo handling managers.

Initially the system has been introduced at Fergusson Container Terminal, but it has the potential for expansion throughout the whole port as demand grows and staff training becomes completed.

The investment in this technology is a further demonstration of the port's commitment to the "Best" philosophy — the best performance, the best communications, the best security, the best ship turnaround etc. It highlights a willingness to be at the forefront of technology to continue to give Auckland the competitive edge.

(Ports of Auckland)

PSA Renews AB Pact With Maersk Singapore

The Port of Singapore Authority (PSA) has renewed its Appropriated Berth (AB) Agreement with Maersk Singapore Pte Ltd. The new AB Agreement, based on a higher guaranteed container throughput than in the previous year, is for a period of one year and has been effective since July 92. The Agreement now allocates two container berths to Maersk Singapore Pte Ltd.

Commodore (Res) James Leo, Executive Director of PSA and Mr M. M. Skaanild, Managing Director of Maersk Singapore Pte Ltd signed the Agreement on 16 Sep 92 at the PSA Building.

The AB scheme was introduced by PSA in 1978. The scheme enables major shipping lines to enjoy berthing priority and volume discount on stevedorage charges. Shipping lines under the scheme can better plan their vessel berthing and operations while their consignees/shippers enjoy more predictable container delivery services at competitive rates. The AB scheme provides greater work together towards serving the shipping and distribution community better and strengthening Singapore's position as a hub port.

Rail Service Reaches Laem Chabang Port

The State Railway of Thailand (SRT) has started the Bangkok — Laem Chabang Port rail track service early this September, marking a new era for intermodaliem in Thailand.

This new route would contribute to the growth of the deep-sea port which could be accessed by road and waterway earlier. Each one-way trip would take about four hour. Whereas it is suitable for transporting a large amount of cargo, it is the cheapest transportation mode between Bangkok and Laem Chabang (about 130 kms.)

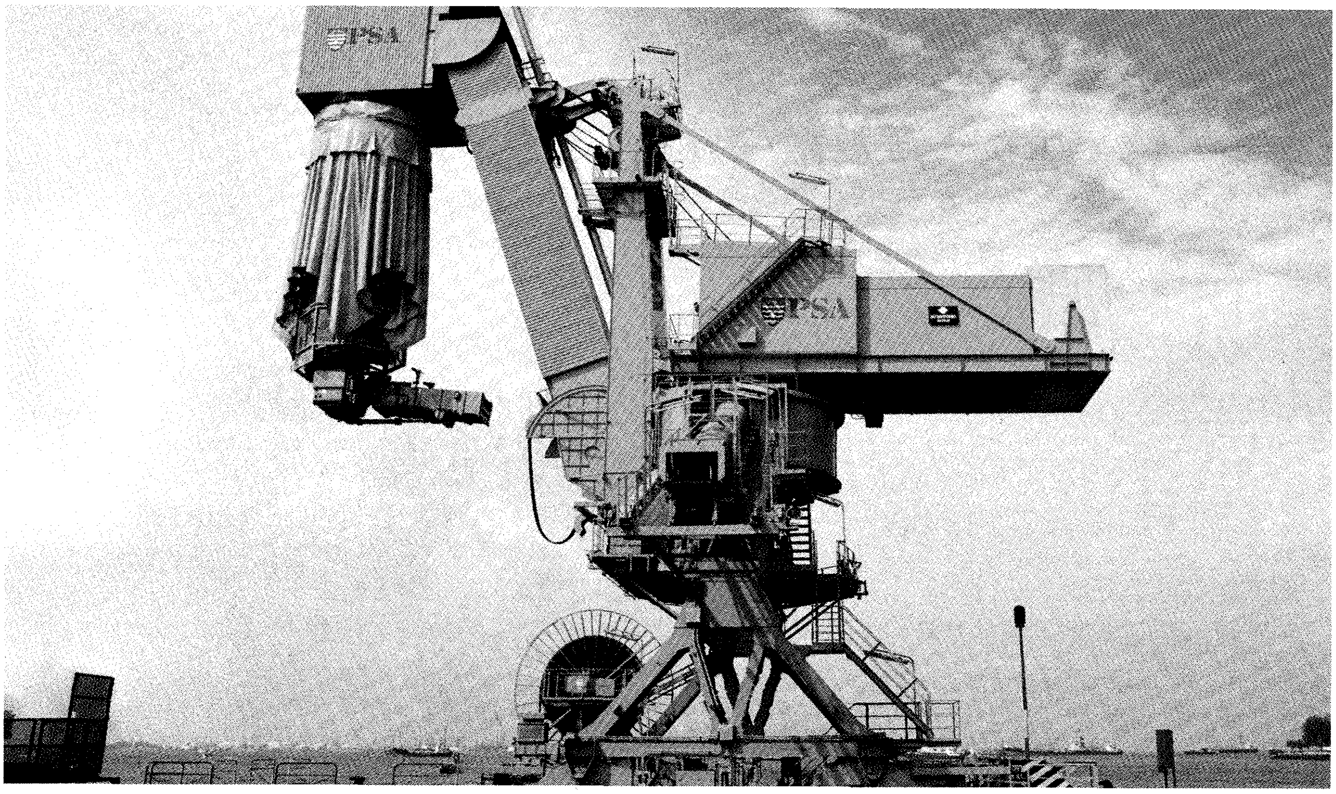
Vice Adm. Somnuk Debaval, Director General of the Port Authority of Thailand (PAT) expressed the confidence that the opening of this route would make LCP more popular among importers, exporters and shipping lines. Apart from this supporting facility the SRT is proceeding bid for operation of the new temporary — 8 acre — ICD located behind the Bangaus Railway Station in Bangkok to sustain cargo to and from LCP.

He viewed that the more convenient facilities provided, the more attractive the LCP would be as the important transshipment centre for the Southeast Asian region and the gateway to Indochinese countries.

At present, PAT operates the multi-purpose terminal and will award the operator for the container terminal No. II soon. Meanwhile, the container terminals No. III and IV are operated by TIPS and RSCO, two groups of shipping companies.

Sale Of Cargoveyer

The Port of Singapore Authority is offering a cargoveyer for sale.



Commissioned by the Port of Singapore Authority in April 1991, the cargoveyer is a rail-mounted gantry structure which transfers bagged or boxed cargo from the ship's holds to the warehouse by conveyer belt systems and vice versa.

SPECIFICATIONS

Prime manufacturer	:	Sumitomo Heavy Industries Ltd - Japan
Rated Capacity (per hour)	:	1,650 bags/boxes of 50kg
Weight of bags/boxes	:	20 to 100kg
Maximum size of bags/boxes	:	120 x 66 x 51cm
Rail span	:	10.6 metres
Wheel Base	:	8 metres
Slewing radius	:	26.75 metres
Slewing angle	:	50 degrees right/90 degrees left
Electricity supply	:	6600V, 3 phase, 50Hz

Tender documents can be obtained from PSA's Supplies Department, 5th storey, PSA Building, 460 Alexandra Road, Singapore 0511.

ENQUIRIES

Those interested can write to Mr Tsin Yeong Mao from PSA's Supplies Department, PSA Building, 460, Alexandra Road, Singapore 0511, for the tender document and any further information.

DID : (65) 321 1255
FAX NO : (65) 274 4677

CLOSING DATE FOR OFFERS

31 December 92

PSA

Port Of Singapore Authority

PORT OF STOCKTON

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PORT OF STOCKTON

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San Francisco Telephone: 415/982-5666
Outside California: 800-344-3213

昭和四十四年十一月十五日 第三種郵便物認可 誌名「PORTS and HARBORS」 十一月号 第三十七巻第九号 平成四年十月二十日発行（毎月一回二十日発行） 発行所・東京都港区虎ノ門一丁目二の八 〒一〇五 国際[illegible] 定価六五〇円