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AN OVERVIEW OF TRANSPORT IN LATIN AMERICA AND THE CARIBBEAN IN 2002

MARITIME TRANSPORT: COMPETITIVE PRESSURES AFFECT FREIGHT CHARGES AND COMPANIES

Freight charges continue to go down. International maritime freight charges reached historically low levels on several of the main east-west routes. In mid-2002, average freight charges from Europe to Asia were at no more than US\$600 per TEU FAK (all in, an estimate based on information from www.ci-online.co.uk). North-south freight rates for South America have also gone down, especially for imports from Asia and the United States to the west coast of South America. These trends reflect the low level of economic growth and are a difficult challenge for shipping companies. For those that operate more with rented vessels, as do the main shipping companies in the region, the impact is slightly less, as rental costs have also diminished.

Larger vessels are being used in regular services. From January 2002 to January 2003, the TEU capacity of shipping by regular liners from South America increased slightly, by 2.8%, while the number of vessels was reduced by 7.3% to 442 units, which means an increase in average size of 11%. In Mexico, the picture is similar: an increase in TEU capacity (+8%; the total for January 2003 is 360,201 TEU) and average size (+17%; 2,094 TEU) compared to a reduction in the number of vessels (-7.5%; 172 units). Somewhat different is the situation in Central America and the Caribbean, where both regions have a higher percentage of trans-shipment, and are less affected by economic crises. The TEUs in Central America, including Panama, grew by a dramatic 43.5% (total 876,258 TEU), the number of vessels by 30% (392), and average size by 10% (2,235 TEU). In the Caribbean, capacity increased by 15.6% (502,387 TEU), the number of vessels by 2% (357 units), and average size by about 13% (1,407 TEU) (calculations based on data from www.ci-online.co.uk). The largest ships are Zim New York with 4,992 TEU in Central America and the Caribbean; MSC Hudson with 4,918 TEU in Mexico; and the CAP vessels of *Hamburg Süd* with 3,739 TEU in South America. In 2002, Tecmarine discontinued its operations in the Caribbean. On the west coast of South America, one Asian line introduced a regular service using gearless vessels (vessels without their own cranes).

Itineraries are more reliable. Comparisons from Lloyds List (<http://www.lloydslist.com/>) for 2002 indicate that the regular services to South America from Europe with the least delays on the east coast were those of *Aliança/Hamburg Süd/CMA-CGM* and the *Lambda* service of P&ON, while

the Evergreen and *Maersk Sealand* services had the least delays on the west coast. The two latter companies provide services with trans-shipment in Panama, which contradicts the perceived risk of indirect services being less reliable than direct ones in their itineraries. The average delays recorded in 2002 were shorter than those of 2001.

Latin American shipyards produce more vessels, although smaller ones compared to the world average. In January 2003 there were 44,872 commercial vessels in the world (www.lrfairplay.com, only considering vessels larger than 300 GT). As of the same date, 2,868 units have been ordered in the shipyards of the world. If the Latin American shares in past and present construction are compared, the share is increasing slightly with regard to the number of vessels and TEU, but decreasing with regard to tonnage (GT). Latin America as a whole is at present constructing 3.4% of vessels, 1.1% of tonnage and 1.9% of TEU in the world. Two-thirds of global ship production takes place in Korea and Japan. In Latin America, 50% takes place in Brazil, while the vast majority of other countries in the region no longer have active shipyards, with the exceptions of Argentina, Chile, Mexico and Peru.

Vessel operating companies maintain a low share. At the beginning of 2003, shipping companies with headquarters in Brazil continued to have the highest tonnages (8.6 million dwt; equivalent to 0.89% of the world total) from Latin America and the Caribbean, followed by companies from Chile, Venezuela, Argentina, and Mexico. These five countries together control more than 89% of the dwt operated from the region, while the remaining 25 countries of Latin America and the Caribbean share the remaining 11%. It should be noted that the company headquarters does not necessarily imply that the company is locally financed, nor that its vessels bear the flag of that country. Several companies with headquarters in Brazil and Uruguay, for example, belong to the Chilean CSAV group, and the majority of vessels operated from Chile use foreign flags. As for container vessels, companies with headquarters in Chile operate with the largest TEU capacity (63,000 TEU; 0.68% of the world total), followed by companies from Brazil, Mexico, Argentina and Cuba. Of the TEU operated from Brazil, 77.5% is in vessels registered under the national flag, while TEUs operated from Chile are 91.2% in vessels under foreign flags. In the case of Mexico, this percentage even reaches 97.9%.

One in every three tonnages of the world fleet is registered in Latin America and the Caribbean. In January 2003, 33.3% of the tonnage (dwt) of the world fleet was under a flag from the region, which maintained the growth level of previous years (calculated on the basis of data from www.lrfairplay.co.uk). The main register continued to be Panama with 193.5 million dwt, increasing its share to 22.7% of the world total, followed by the Bahamas, St. Vincent and the Grenadines, Bermuda and Antigua and Barbuda, all of which have open registers. The average age of the vessels in the majority of the main registers is less than the world average of 18 years, the youngest fleets being those of Antigua and Barbuda (13 years), and Panama (15 years). The countries with fleets older than the world average are Brazil (19 years), Venezuela (22), St. Vincent and the Grenadines (25), Bolivia (30), Belize (27) and Honduras (32). Approximately 75% of the vessels of the world fleet are classified by a member company of the IACS (International Association of Classification Societies) which claims to promote a higher level of security and quality in classifications. The percentage is higher for the majority of the main registers of the region, reaching 92% in the case of Antigua and Barbuda. The following registers are below the world average in this respect: Venezuela (65%), Belize (56%), Honduras (45%) and Bolivia (38%).

INTEGRATION AND TRADE: THE GROWING ROLE OF TRANSPORT

The extended border. The year 2002 was marked by a growing concern for security in international transport. In order to reduce the risk of terrorist attacks, it was especially the United States that insisted on more security measures in the countries supplying its imports. The introduction of controls and new requirements in the maritime ports and airports also brought security benefits for transport between Latin America and Caribbean countries. On the other hand, the costs were also high. In developing countries the equivalent of the amounts required, for example, to introduce new electronic equipment in ports or airports, could have financed measures in other areas to increase the average life expectancy in developing countries rather than to reduce the risk of terrorist attacks. Another impact of the greater global concern for security was the reduced demand for tourist journeys, both by air and in maritime cruises. The negative effects for Latin America and Caribbean countries were to a certain extent cushioned by the fact that tourism to Asian and African countries was partially deviated to the Americas.

Modal split for national and intraregional transport. In 2002, various regional organizations increased their efforts to promote competitiveness and regional physical integration. ALADI, ADC and IDB have carried out various studies on maritime transport in South America, and ECLAC organized a workshop on that subject, all concluding that there is clearly a potential for promoting sustainable development, competitiveness, regional integration, and the comparative advantages for South American shipowners, if a regional agreement can be reached on coastal shipping. It is hoped that further progress will be made within the framework of IIRSA in the current year. ECLAC also organized an expert meeting in Panama on trade between Central America and the Caribbean, where one of the conclusions reached was that, although the lack of direct services between both sub-regions cannot be considered the main cause of the low level of inter-subregional trade, there is still scope for improving economic integration by improving the availability of information and promoting port reforms.

Intra-regional containerized trade is diminishing. Throughout 2002, containerized trade among the countries of Latin America and the Caribbean diminished both in absolute terms (-4.4%) and in relative terms in relation to total trade (-3%). Although in the 1990s intra-regional trade, especially in Mercosur, was one of the driving forces in maritime growth, this trend seems to have stopped. Exports to the world grew by 1.5%, reaching a total of 4.3 million TEU, and imports were reduced by 4.4% (4 million TEU). Argentina's imports went down by 55%, and those of Venezuela by more than 10% (calculated on the basis of forecasts from www.globalinsight.com at the end of 2002).

PORTS: MAKING PROGRESS ALONG THE DIFFICULT PATH OF MODERNIZATION

Port activity. Colón in Panama, including the terminals operated by String Services of America (MIT), Evedo Hutchison Port Holdings (PPC), and Evergreen (CCT), in 2002 continued to be the leading port in Latin America and the Caribbean in terms of container transfer (1.45 million TEU). In South America, preliminary data show that Santos reached 1.23 million TEU, while transfers in Buenos Aires terminals reached only about 600,000 TEU, a reduction of almost one half compared to the historical record of 1998. In the Caribbean, Kingston, Jamaica, reached a total of 1.03 million TEU, thus managing for the first time to be among the first three ports in the region.

Ten-day strike in United States ports, and its impact on Mexico. At the beginning of October 2002, the Mexican ports of Ensenada, Manzanillo and Colima experienced an increase in merchandise transfer of the order of 50%, thus straining both the operational capacity of their facilities and services and the infrastructure for road transport. This occurred because of the strike

and closure of 29 ports of the west coast of the United States, owing to a dispute of the stevedores union with the employers organization, until a federal judge intervened, owing to the lack of an agreement on the renewal of the collective agreement that had expired in July of the same year. On the tenth day of the strike and at an approximate cost of US\$10 billion to the United States economy, the strike was terminated by invocation of the Taft-Harley Law of 1947, which authorizes the Government to obtain a restraint of 80 days on a strike that endangers national security or the well-being of the nation.

A concession is on the way for Acajutla Port, El Salvador. At the end of September the national legislative assembly approved the new Port Maritime Law, and then the basis for tendering the master concession for Acajutla Port. The winning company must have a minimum of five years' experience in port management. It will receive a concession for 25 years, with the option of a 10-year extension, depending on its performance and quality standards. It also has pay 14% as rental for the areas adjoining the port. The concessionaire, on signing the concession contract, must make an advance rental payment of US\$12 million. In the first 10 years of work a minimum of US\$18 million must be invested, about US\$11 million of which should be invested in the first three years. It was agreed that tariffs would be reduced by at least 25% with regard to current charges.

Callao Port, Peru, still waiting. In 2002, the port and foreign trade community of Peru saw a year go by without significant progress being made in the process of reform of its regional ports and the concession of its main port. The new general law on ports was presented by the Executive to Parliament and is at the stage of analysis and evaluation by the various committees of Congress. Once approved and promulgated, the Law may open the way to the tendering of a concession for the entire port of Callao and then to obtaining the infrastructural investment required.

Esmeraldas port Ecuador, is moving forward with the reform process. In 2002, significant progress was made towards awarding the entire port to a single concessionary, with seven firms interested and pre-qualified (five foreign and two national firms). Esmeraldas deals with 8% of the cargo of the country and will need investment estimated at US\$25 million. Meanwhile, the public terminal of Guayaquil port, where the warehousing is currently allocated to four permit holders, is expected to be assigned in its entirety to a single concessionary operator, and under the management of the new national Government, it is hoped that in the delay in the tendering process can be reduced in 2003.

New terminal for cruisers in Valparaiso, Chile. At the end of 2002, the company Empresa Portuaria Valparaíso (EPV) and the Valparaíso passenger terminal (VTP) signed the contract for the latter company to provide and operate for 30 years the infrastructure required for operation of a terminal building for passengers in the Barón de Puerto sector of Valparaíso, in a large warehouse sector. VTP will invest a sum estimated at US\$7 million in order to reach the standard required by the contract with EPV. Similarly, EPV assigned to the company Agencias Universales S.A. (AGUNSA), in an international public bidding process, the construction and operation of what will be the first passenger terminal building in the country. The formula proposed by EPV consisted of provision by a private investor of the infrastructure and installations that the tourist operators need for providing land services for the passengers and crews of cruisers that arrive at the port, as well as the vehicles needed for their transfer between the terminal building and the mooring areas where they embark and disembark. The sector assigned for passenger services will basically include passenger waiting areas, public service areas, business premises, and other high-standard facilities, at the level of a modern international airport.

URBAN TRANSPORT: THE PROBLEM OF RECONCILING THE GOOD AND THE AFFORDABLE

Public transport and the Argentine crisis. During the 1990s, there was in general a change of attitude in Latin America in relation to urban public transport, such that less emphasis was given to the consumer cost of the service, and more to the quality of the service received. Tariffs rose without generating the protests that had occurred before, except in the cases to be mentioned, as there was also at least a modest increase in the quality of the service and the passengers' willingness to pay. Good urban public transport seemed to be something that was within the purchasing power of Latin America and the Caribbean. Subsequently however, especially in 2002, there were some signs that the optimism of the previous decade might have been premature, the most obvious indication being the events in Argentina, the result of the socioeconomic crisis that had been unleashed at the beginning of the year, when the financial defences established against the pressures of growing economic and political imbalances could no longer hold out. The gap between the costs of public transport services and the ability of the users to pay for them grew wider, resulting in an explicit subsidy on public transport in the city of Buenos Aires that was equivalent to 10% of the tariff. This type of subsidy had previously been withdrawn throughout the region.

Rail transport in the metropolitan area of Buenos Aires also entered a crisis syndrome, a result of reductions both in the number of passengers and in their willingness to pay and in the timeliness of payment of the operational subsidies contracted with the government, while the costs of providing the service increased. In the long term, until the crisis comes to an end, the only viable solution seems to be to readapt the quality of the service to the consumers' willingness to pay. In April 2002, the volume of suburban train traffic had fallen by more than 20% compared to the previous year. The largest reduction, of more than 40%, occurred on the Belgrane South line of the company *Metropolitano*, which in November applied for bankruptcy protection. The figures certainly overestimated the actual reduction in traffic, as there was an increase in the number of passengers travelling without tickets. In the few new cars that were included in the Buenos Aires service, no attempt was made to provide the passengers with greater comfort, preference being given to a very basic design that gave more emphasis to combating vandalism, a problem also faced by *Metro* of Mexico, *MetroTren* of Chile, and others.

Urban trains that failed. In other countries, the high cost of a decent public transport service became apparent in other, less obvious ways. In Santiago, Chile, an attempt to offer a concession for the installation and operation of a suburban train service between Santiago and the satellite city of Melipilla failed. The State offered a subsidy, but, taking into account the risks involved, the private sector did not see any prospects for making a profit in view of the requirement for investment of about US\$300 million. At the other extreme with regard to investment, in Peru, the private company *Central Andina*, decided to test the suburban transport market by allocating existing rolling stock to a passenger train service on an urban segment of the Central Railway, and had to withdraw it rapidly for security and financial reasons.

Buses versus trains. In 2002, the high cost of rail options ensured that there was no loss of interest in buses as a form of public transport, as the latter is much more economical from the point of view of the amount of investment needed per passenger. In Lima, although the Electric Train, completed and installed in 1997 on a 10 km segment between Villa El Salvador and Atocongo began to transport passengers, it continued to be in effect a white elephant, irrelevant for the vast majority of passenger transits, and will continue to be so unless it is extended to the centre of the city. Meanwhile, in the Peruvian capital, with the support of loans from the international banking

system, the authorities continued to move forward with preparations for an extensive expansion and modernization of its system of high-capacity buses that circulate in exclusive lanes, modelled on the Bogotan Transmilenio system. In the city of Bogota, implementation continued of the second phase of the Transmilenio project. In the first stage, an effort had had to be made to accommodate a level of demand much higher than forecast, which confirmed that mass transport by bus is not the solution for transporting more than 25,000 persons per hour and direction.

A competitive city needs transport investment. In Santiago, Chile, a very bold policy was adopted, although not without ambiguities, as, while plans were being made for the large-scale operation of articulated buses on segregated lanes in large areas of the city, over a corridor with characteristics very similar to existing corridors, the much more expensive tramway was chosen as the solution. It was the Government of Chile that demonstrated the greatest conviction that a competitive city in a globalized world needs a modern transport system, whatever the cost, and in 2002 work was begun on line 4 of the metro, at a cost, including small extensions to other lines, of almost US\$1.5 billion, which will double the length of the network by the year 2006. This attitude was shared to a lesser degree by some other governments. In Sao Paulo work continued with the construction of line 5 of the metro and the modernization of the existing suburban train and metro system, and the construction of a new line 4 was announced. In Mexico, after various years of stagnation, a programme was initiated for construction of new trains, the restoration of others and also of five metro lines, and engineering studies were commissioned for a new line 12. Owing to the national economic crisis, Buenos Aires was not able to invest on a comparable scale, although, in view of the investments made in the railway network at the end of the nineteenth century, in the underground railway at the beginning of the twentieth century and the transformation of the minibus systems in the second half of the latter, the Argentine capital retains a good foundation that will help it to become a focal city in a globalized economy, once the country has resolved its current crisis.

Landscaping and highway administration. Road works were influenced by the pressures of city dwellers and environmentalists, which meant, in the case of Mexico, the people's rejection of a dire plan to add a second level to large sections of the main road network. Meanwhile, in Santiago, work continued on the Costanera Norte concession, where an underpass was planned, but beneath the waters of the river Mapocho, where it would not damage the urban landscape.

RAIL TRANSPORT: ALIVE IN PRIVATE HANDS OR DYING OUT IN STATE HANDS

Non-franchised railways face the threat of extinction. In 2002, little progress was made in the area of railway privatization, which strengthened our view that almost all of what can be privatized already has been. What does remain in the hands of public-sector administrators is in countries such as Ecuador and Paraguay, where no one will be interested in taking responsibility for railway services unless there are significant state subsidies, which have not and probably will not be offered. The result is that train development is paralysed. The case of Ecuador seems to be terminal; the state railway company tried to remain active by, for example, repairing passenger railbuses, but was frustrated by the mayors of some of the towns which it wished to serve, who demonstrated their level of enthusiasm for rail transport by asphaltting over the railway in order to facilitate road transit. It also looked for salvation in tourism that could have supported some segments, although not all of the railway.

In Paraguay, two significant events enhanced the potential for railway concession. Railway assets were transferred to the newly-formed company Ferrocarriles del Paraguay S.A., and the

binational company Hidroeléctrica Yacaretá renewed its offer to relocate a railway segment that had been flooded by an artificial lake which it had created. Even so, realistic calculations indicate that a concession for the railway, which at present is almost entirely paralysed, is impossible without a subsidy, which the Paraguayan government would find difficult to offer. The section from Asunción to Sapucay of Ferrocarriles del Paraguay, in view of its historic architecture, wood-burning locomotives, wooden carriages and primitive steam engines from its workshops in Sapucay, is worth conserving as an important international historical relic.

Concessions that were not returned. In 2002, rather than concessions being awarded for railways that are still under state control, it seemed more likely that concessions previously awarded would be returned to the respective governments, as in the case of the Administración del Ferrocarril Arica a La Paz, in Chile, whose services were suspended for a year and a half, after the washing away of bridges owing to the increased flow of the river Lluta at the beginning of 2001, and the Argentine Ferroexpreso Pampeano, which was also the victim of infrastructural damage caused by excessive rains. This did not occur in 2002, however. The previously observed trend continued of partial or total mergers between related railway companies, the most significant being in Brazil, between the companies Ferronorte, Ferroban and Novoeste, which merged to form Brazil Ferrovias.

Traffic is increasing. Although not all of the companies awarded concessions complied with their contractual obligations, in general the partial evidence available indicates that rail activity has increased although the companies' profits are fluctuating. The majority of Argentine and Chilean companies transported more cargo than in 2001, and the same was expected by Brazilian and Mexican companies. The Chilean company Ferrocarril del Pacífico, owing to its expectations rather than the losses incurred during its first five years under private administration, received attention from consortiums interested in purchasing it, even at a higher value than at the time of its privatization, in the mid-1990s. Although the level of profitability is quite low, some companies expanded their share in the multimodal transport market, including the Ferrocarril del Pacifico in Chile, whereas MRS Logística tried out a roadrailers service between Sao Paulo and Rio de Janeiro.

Railways and international transport. Interesting initiatives took place in the area of international rail transport, for example a joint initiative by the brand new Brasil Ferrovias and the Ferrocarril Oriental in Bolivia to offer a continuous service from Santa Cruz de la Sierra to both the metropolitan area of Sao Paulo and the port of Santos. Mention could also be made of the promotion of coordinated operations between railway companies on both sides of the Mexico-United States border, including one known as the NAFTA Railway, which is a collaboration between the companies Kansas City Southern, Texas Mexican Railway and Transportación Ferroviaria Mexicana, which also reached an agreement with Union Pacific.

There was still interest in the construction of a railway connection in the south, between Argentina and Chile, on the latitude of Longuimay and Zapala, as on various previous occasions over the past 116 years, and the government of Neuquén Province announced the resumption of work on the Argentine side. There was also a new proposal to reopen the legendary Trans-Andean Railway, between Los Andes in Chile and Mendoza in Argentina. A project designed by a Mendoza company was declared to be of public interest on both sides of the border. It is basically a matter of resuming train services on a segment of track that is little different from the one abandoned in 1984, but without using the traditional racks. The promoting company considers that the project is viable without subsidies. There are, however, issues such as the steep gradients of up to 8%, and the single track with its one-metre gauge, which is different from the width of the Argentine and Chilean

railways with which traffic would be exchanged. For these reasons, it is unclear whether it can transport sufficient volumes to be commercially viable without state assistance.

THE ROAD INFRASTRUCTURE: AN IMPORTANT YEAR

Road concessions virtually stagnated. In the year 2002 almost no new road concessions were granted, and those granted previously were mainly continued. Various calls to tender were postponed. There are two main factors involved.

- The after-effects of the recession that affected in recent years to a greater or lesser degree the various countries of the region. This had a negative impact on transit growth rates, which were very low or even negative, which discourages road investment; and
- the lesser availability of capital for investment in the region, with the subsequent increase in the relevant interest rate.

The combination of the above factors made the possible new concessions less attractive or simply less feasible. It may be added that (i) in various countries such as Chile, Colombia and Mexico concessions for the most attractive road segments had already been awarded as they had higher transit rates and (ii) there are countries that have scarcely explored the potential for road concessions. It is hoped that the economic situation of the region will develop positively, which may clear the way for resuming the concession process, but subject to establishing portfolios of well-analyzed and designed projects that are feasible for the investors.

The few new initiatives include the concession in Peru of the Ancón-Pativilca section of the Panamerican highway, which involves an investment of US\$72 million. In Costa Rica, after the disputes among concession companies that had lasted more than a year were resolved, it was possible to resume the contract process for the highway between the capital San José and the port of Caldera (86 kilometres), with approval by the accounts office still pending.

In Uruguay the negotiations were completed and work began on what is known as the megaconcession, which covers 1272 kilometres on various routes, for which there will be routine and regular maintenance, repairs and some improvements. The concessionaire is a subsidiary, created specifically for that purpose, of a state entity, the National Development Corporation. As the transit levels are insufficient, it was planned that tolls would cover 60% of the costs and that 40% would come from the national budget.

In Colombia, the concession for a highway from Bogota to the north, 220 kilometres in length, awarded in July, immediately entered into a process of restructuring the road design, as it is considered essential to extend it to four lanes in various sectors. This shows the need for meticulous studies and a proper design prior to the tendering process.

In Chile the current concessionaires were offered in December a non-retroactive transit insurance, without prejudice to the annual guaranteed minimum income already included in the contracts. The insurance is based on the fact that the concession transit levels fell by 1.3% and 0.1% respectively in the years 2000 and 2001, and in 2002 they increased by 2.8%, which leaves them approximately 20% below the projections made in 1998. The proposed insurance, which must be accepted or rejected in January 2003, would guarantee growth rates in the future of between an annual 4% and 5% above current levels. under the terms of the insurance, if transit levels are

lower, the length of the concession will be extended and viceversa. The cost of the insurance (variable according to the amount insured) will be paid with additional works.

Bad news for road conservation. The economic difficulties had a negative impact on the resources assigned for maintenance. The road maintenance budgets in various countries, already traditionally insufficient, were reduced, resulting in a lower level of activity. In Argentina many existing contracts for resurfacing and maintenance were frozen.

With the exception of Nicaragua and Guatemala, the road maintenance funds continued to operate and to contribute to road maintenance. FOMAV of Nicaragua has never received funds. Unfortunately, during 2002 many roads deteriorated to a serious extent, especially in agricultural production areas, without there being a budget for proper repair.

In Guatemala, conservation was virtually frozen in the last quarter, as budget reallocations left no resources for that purpose. The worst is that a decision of the Constitutional Court, as yet unsigned, stated that the fuel taxes allocated to maintenance were unconstitutional, as they amounted to a double taxation on imports. If this judgement is confirmed, the road fund will be left without any income.

An exception in this area is the vigorous entry into force of the road fund in El Salvador, which started up a comprehensive programme for resurfacing and routine maintenance. In Uruguay, in the midst of a severe budget reduction, it was possible to continue maintenance activities.

TELEMATICS APPLIED TO TRANSPORT: A LACK OF REGIONAL TECHNOLOGICAL STANDARDS

In the area of urban transport, in 2002, three countries in particular should be mentioned: Mexico extended the adoption of electronic fare payment systems for urban transport, introducing them in various Mexican cities and not only in the capital or main cities, as has been the trend in Latin America. In Sao Paulo, Brazil, the ANTP (National Association of Public Transport of Brazil) together with regional technology companies and the UITP (International Public Transport Union) began work to establish a corporation that encourages the development of a Latin American platform for public transport. In Chile, the work of ITS Chile began, a private-public organization that will promote the adoption of Intelligent Transport Systems (ITS). During the First Chilean Congress on ITS, the Free Flow teletoll systems were presented, which will be used in urban concessions in the future. These systems allow payment to be made without a need to reduce speed or the use of barriers, which impede and delay the process. Lastly, the first draft of the ITS National Architecture of Chile was presented. This is an integration plan for ITS systems over the next 15 to 20 years, which identifies and establishes the standards required both for the exchange of information and for ensuring interoperability among the national actors.

With regard to maritime transport and ports, development work continued on information platforms to support, facilitate and add value to foreign trade. The future challenges are to enhance security levels (strongly increased since 11 September) and reduce the waiting time for ships and merchandise in the port, thus facilitating the different administrative and control procedures. In this sense in Brazil, the Container Terminal (Tecon) adopted the *Linha Rápida* information system, which supplies information on each stage of the logistics chain by means of Internet, EDI or SAP to monitor product movement in real time. This same system is also used in Viracopos airport, in Campinas, which gives it greater validity as an interface. The Federal Government streamlined its

information systems and administrative procedures in order to reduce waiting times and to supply information on customs procedures, and authorized electronic payment of some port duties, which in addition to eliminating paperwork, reduced the time involved and the potential for fraud in this process. This is in line with the trend to computerize ports and provide added value services, as has been the case with BACTSSA in Buenos Aires, Argentina and Valparaíso in Chile, with its Valparaíso Logistic Trade portal.

As for rail transport, the State Railway Corporation (EFE) of Chile will use software applications developed by the Spanish National Railways System (RENFE), through the systems and equipment that the latter has in Spain, to which they will connect through a network with an intercontinental node. The solutions will be applied in the areas of traffic administration, sales areas and ticket reservations.

Each of these developments required large amounts of investment, countless hours of research and as many more for development, which is why the creation and the work of public-private associations, such as ITS Chile or ANTP in Brazil, which allow the establishment of national and possibly regional standards for transport, are considered essential for establishing and supporting future developments. The formulation of these frameworks for action will allow both an enhanced integration and facilitation of the regional market, especially in the road flows and customs services, and certainly the creation of a wider and more attractive market for technology companies, which will lead to a significant reduction of technology costs as well as of associated services.
