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I thank organizers, sponsors for giving me this opportunity to comment for this Forum. I should be brief especially after five excellent presentations. I would like to add two points (1) current air cargo transportation and vision for the future, and (2) integration of all components of "logistic chain".

Air cargo is not yet reached to levels of maturity as in highways, waterways and railways

Air transportation's history is very short compared to roads, waterways and railways. The first commercial flight was soon after Wright brother's first flight (1903), a department store in Chicago used airlift to carry merchandises from a southern state as a part of its advertisement. Next stage was US postal services. They used aircraft systematically. Then passenger air travel has almost swallowed entire aviation industry pushing cargo and mail under the shadow as we observe today. I think air cargo will become comparable to other transportation modes after evolution in the following three areas.

(1) Air cargo needs to be separated from passenger services
(2) Air cargo needs urgently a regulatory reform
(3) Freighter aircraft development

First, passenger/cargo separation issue; air cargo is carried in two ways, one in belly compartment of passenger aircraft another is by all cargo plane (freighter). At present a half of air cargo is still carried in bellies of passenger plane. Let me explain why this is a problem. For passenger/cargo combined services, usually passenger side takes priority for flight schedules. When airlines compete in services for passenger connection or early arrival at destination, they do not wait for cargo to the detriment of passenger competition. As the result a large capacity of belly compartment (it is more so in wide-bodied aircraft) is often uncommitted to programmed logistic chain, thus sold in bulk cheap to air cargo consolidators and forwarders. This is a good business opportunity for them selling "not time-sensitive" services. Airlines have least appetite for "inferior services but cheap rate" business. Strangely there seems to be a lingering reluctance for change in air cargo

market. Recently many used passenger wide-bodied aircraft are converted to freighters. This is a step forward for independence of air cargo operation.

Turning our attention to other modes, maritime has cruise ship and speed vessels such as "jet-foil", railways have Shinkansen, TGV and linear motor car, the separation of passenger and cargo services gave both liberty to respond to respective diverse market demands. For cargo side, maritime has container ship, roll-on/roll-off ship, oil tanker, freezer vessels etc., railways have double stuck container train and "rolling highway" train, specialized cars for liquid, temperature controlled etc. On highways, specialized vehicles such as truck and trailers which run through cities' industrial zone where commuting vehicles or buses are restricted. All these evolvement of transportation vehicles are results of repeated carriages of specific commodities such as oil, grain, ores, agricultural products some live. Manufacturing products, precious metals, chemicals, or dangerous goods.

Second, freeing air cargo from traditional bilateral air services agreement would be a matter of urgency. It is evident that international cargo is more than two countries matter when we build an efficient supply chain logistics. Traditional bilateral air services agreement is the current international regulatory framework where two countries exchange "traffic rights" on the reciprocal basis. Here again, air cargo tended to be placed under the shadow of passenger issues. What truly needed urgently is not administrative patchworks, but a structural reform to encourage healthy air cargo business ventures and initiatives.

Third, aircraft manufacturers will build aircraft for sole purposes of freight carriage.
B747 can lift about 110 tons. Fedex and UPS have placed order of A380-F. But it can lift only 40 tons more, about 150 tons. Some technical experts are studying about aircraft directly meet the cargo users demand. Today's jet aircraft can travel fast, but capacity in weight and volume is limited. Sometimes speed is even an un-needed feature. Future type of cargo aircraft shall be designed with extreme care for the environment and for the low cost. Supply Chain Management experts demand that shipment be "not late, not too early, just-in-time".
What kind of freight are in scope for the next stage commodities to be carried on air? In the market, experts say outsized cargo such as construction equipment, power generator, satellite, containers truck vans. When Alaskan pipeline project was blocked in early 1970's Boeing tabled a plan to build Resource

Carrier, RC-1 that could lift 1000 tons.[1] Russian Antonov once demonstrated very large capacity aircraft. There were several other ideas of new cargo aircraft that can carry 160~300 tons, however none of them had enough commitment from airlines yet. An interesting plan by a German company called AirLifter in 1999 can carry 160 tons with the speed of approximately 65 miles/hour "lighter-than-air-dirigible" using helium gas. No long runway, not much fuel burn necessary. In the air freight business the true economics will continue to lead. If the market is ready to pay, even grain, petroleum, ores and gravels of that sort could be on the list. As we all believe that transportation industry will continue to evolve in changing circumstances, as examples, IT application, market liberalization and environmental sustainability demands, early launch of new cargo aircraft should not be unrealistic.

Positive signs of air cargo business expansion under the given conditions

Now, welcome back to the reality!

Even all handicaps air cargo business must bear today, OECD reported that "1/3 of value of world merchandises trade used air cargo"[2] which is already a significant proportion to world economy. OECD also revealed that "total door-to-door market revenue of $150 billion, in which the air-way-bill market revenue was $50 billion for 1997."[3] The 2/3 of total cost for logistic chain was taken by the ground. When all transaction data will be installed in computer system, we will be able to identify "who earns how much for what services".

Fighting against rising costs and raising efficiencies in key airline operation, IATA in June 2004 adopted a global action programs under "Simplifying the Business".[4] Among them there is a campaign for "e-Freight" that claims today (1)Average 25 documents per shipment at a cost of $30.00 each involved, (2)Paper used to process shipment every year could fill up 39 747-400F in volume, (3)An international shipment took 6.5 days 20years ago, today it still takes 6.0 days on average -1day to fly, 5days for paperwork and others.

Another "big-bang" effects of IT in air cargo business is now it is possible to track and trace of shipment on-line and real time. This made cargo transportation transparent and "time definitive" so that exporters and importers alike can arrange just-in-time logistic chain to reduce costs. As the result, airlines can make 6 ~7 times more revenue by guaranteed time definitive services[5] than un-programmed bulk space.

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[1] An Introduction to Airline Economics (6th edition) ,William E. O'Connor. Praeger Publishers 2001 ISBN 0-275-96911-8

[2] OECD Working Paper No.49 at ICAO Air Transport Conference, 2003, Montreal

[3] OECD paper 76280 of April 7, 1999, "Regulatory Reform in International Air Cargo Transportation" page 16

[4] IATA 60th AGM Singapore, June 7th 2004. Five priorities to Simplify the Business Process. ;Replace paper tickets to e-tickets, Bar coded Baggage Tag, Radio Frequency Identification of Baggage, Common Use Self-Service check-in, e-freight. IATA Facts & Figures of Nov. 2004

[5] Air Transportation, 5th Edition, A.T. Wells and J.G. Wensveen, Thomson-Brocks/Cole 2004, USA ISBN 0-534-39384-5

Docking the effort for inter-modal integration

The smallest transportation units are packages, boxes and crates that fit tight into standardized containers and pallets, some added features such as temperature controlled. Air cargo, despite handicaps mentioned earlier, has been spearheading standardization that enables transshipment smooth. Today, the same skills pursuing physical compatibility have been directed to other modes to integrate among them.

Another set of issues to support to enhance transport business across the different modes of transportation is legal and financial nature. They are already accepted as universal norm, but require disciplines of concerned parties. Also institutional support, especially today with IT application, is essential.

(a) responsibility and cost sharing over shipment between exporter and importer described in Incoterm (ICC),
(b) trade account settlement,
(c) roles of bank, LC or other forms of guarantee,
(d) risk hedging such as war risk, liability insurance,
(e) roles and responsibilities of carriers,
(f) documentations; export document, import document, transportation documents, customs documents, insurance and banking documents
(g) customs clearance
(h) in the case of dispute, which arbitration mechanism parties choose etc.

"Policymaking for Integrated Transport Market for China, Japan and Korea"- EWC-KOTI

EWC-KOTI led research studies inviting government, academia and industry experts since 2001. They published a book titled "Policymaking for an Integrated Transport Market for China, Japan and Korea" in December 2005. This research aimed to prepare a basic plan for reducing or abolishing legal, institutional, technical and physical barriers among three principal countries in Northeast Asia. Also it discussed strategies to induce co-operation and co-ordination among the region's transport and logistics systems consisted of air Maritime and intermodal transport markets. It covers all essential points of transport

-one shipment per pound revenue is $2.00~$2.50 for "time definite" guaranteed door-to-door, while airport-to-airport space available basis cargo yield is $0.30~$0.40

market integration with priority and strategic approaches. Here are selected points of conclusion, the study identified;

1. Step-by-step approach achieving "soft-spot" integration among the three. For example, establishment of common statistical database.
2. Northeast Asian Conference in Maritime Transport (NACMT) as regular tripartite conference body
3. Northeast Asian Arbitration mechanism for dispute settlement.
4. Regional Common Transport Policy.
5. The permanent institution to foster China, Japan and Korea Transport Market Integration, for which "Joint Declaration of China, Japan and Korea on Promoting the Tripartite Cooperation" of October 7, 2003 can be foundation for such institution.

<u>European case would be the best precursor for NEA transport system integration</u>.

Among many other publications regarding NEA regional co-operation, EWC-KOTI book has unique value owing to the record of straightforward and uncompromising views of many participants but all believed that this is the right direction. Especially I was moved by seeing it tried to face a persisting air of hostility remaining against Japan's aggression during the previous World War which threatens to nullify co-operative ground. As one of EWC-KOTI papers suggests, I agree that EU experience would be the best precursor to NEA integration for physical connection of transportation network as well as system integration. Also I would like to emphasize that European unification through European Coal Steel Community of 1952 did start by Customs Union, not by FTA. German wartime aggression was the main issue. This point also justifies the idea that we study well about EU experiences as NEA precursor. Our start line shall be set to the lowest development level from where we jointly construct brick by brick in reference to the most suitable architectural experiences available for NEA transportation market integration.

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Please allow me to quote the great Chinese author, Lu Xun because it very appropriately express the reality of our task. He says, 我想希望本是无所谓有，无所谓无的。这正如地上的路，其实，地上本没有路，走的人多了，也就成了路 (When I think about "hope", it cannot be said to exist, nor can it be said not to exist. It is just like roads across the earth. For actually the earth had no roads to begin with, but when many men pass a way, a road is made.)