Looming monsters

The Concorde tragedy and speculation about the Concorde's demise have sparked interest in the history of its creation. The Concorde started as a joint venture of Britain and France, both of which were promoting political agendas. England, for example, thought the project would smooth its entry into the European Community.

Only 16 Concordes were ever built, despite "firm" orders for 74 (and options for many more.) The service made economic sense only when the airlines were allowed to write off the planes' capital cost (underwritten by their governments), leaving only operating expenses to be recovered.

In June, Airbus Industries announced development of the most ambitious plane since Concorde made news almost 40 years ago. The A3XX, a super-jumbo jet, is to be the world's largest passenger plane. A double-decker plane, it will have state rooms, casinos and numerous amenities.

Development of a new airplane is a "bet-the-company" decision. Airbus claims the market for planes of this size will be 1,500 units over the next 20 years, and that it will capture at least half of it. It also claims to have eight potential airline customers. Its competitor, Boeing, says the market is less than 400 planes — a size not worthy of such investment. Boeing, instead, will offer a modified version of its 747.

Airbus is responding to crowded airports with limited takeoff and landing slots, and it's betting that airlines will try to concentrate more passengers on fewer flights, while offering more amenities. Alternatively, Boeing believes "most passengers, whenever possible, want to avoid congested hubs and want more point-to-point service."

Meanwhile, no one is certain whether the necessary terminal infrastructure exists to handle a plane such as A3XX.

We are most likely years away from seeing the climax to this air drama. Boeing has claimed that Airbus is unfairly subsidized by national governments. Airbus contends that Boeing uses profits from the 747, for which there is no competition, to cross-subsidize prices for smaller planes that face heavy competition.

This situation evokes a comparison to events in the ocean transportation world. It seems that rarely a week goes by without the announcement of more vessel capacity being acquired by a carrier. Steamship lines that were leaders in acquiring post-Panamax vessels are announcing additional capacity, and lines that were originally hesitant to jump on the trend have now thrown caution to the wind and entered into the hysteria.

In fact, the maximum vessel size is now being redefined. Vessel design and engine capacity constraints, which have limited vessel size to fewer than 8,000 TEUs, are being reexamined. Builders now are discussing using a pair of engines and other design enhancements to create "Malaccamax vessels" up to 18,000 TEUs in size.

The Panama and Suez Canals would need to be altered to accommodate such vessels. Panama is considering a third set of locks which would allow transit of these behemoths. Suez, without any locks, would need to dredge — a project which the ports of Rotterdam and Singapore have considered funding to accelerate introduction of these vessels, which only their ports could accommodate. This is similar to the Port of Oakland joining with the Union Pacific and APL to fund tunnel clearances in the Sierra Mountains. Ironically, while the project was an engineering success, it did nothing to stop the Port of Oakland's decline as a West Coast load center.

Deployment of large vessels has increased the need for major ports to become load centers supporting transshipment. In the United States this means rail intermodal. With certain, very limited exceptions, we see little water-to-water transshipment. This is the result of the Jones Act — which restricts intra-U.S. transport — and the high cost of terminal operations.

According to a recent study by Drewry Shipping Consultants, almost 25% of containers are transshipped today, compared with only 10% 20 years ago. Another study, by the National Ports and Waterways Institute of Arlington, Va., suggests "an equatorial beltway of specially built transshipment ports." Locating these major ports along the equator would minimize transit time and concentrate the infrastructure investment to a handful of ports that would transship to and from north-south vessel services.

Transhipment would be accomplished by working both sides of the vessel simultaneously without any land-based handling. Feeder vessels would be worked on either side — which is not a new idea. Hong Kong handles over 3 million TEUs a year in such a fashion. In fact, Hong Kong is competing with direct China services by selling barge-transload through their port as a cheaper and more efficient method of transport.

Perhaps the greatest problem with the introduction of monster planes and vessels is the existing infrastructure that practically overnight they will render obsolete.

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