

FOREIGN COMPETITION AND DEPARTMENT OF DEFENSE IMPACT
Allen H. Skaggs, Aerospace Industries Association

We have become accustomed to seeing U.S. manufactured aircraft, large and small, win the major sales competitions around the world, because of their economic and technological advantages, and because of the quality of service support provided by our manufacturers. Encouraged by the size of the U.S. domestic market, U.S. manufacturers have competed intensively with each other to provide a full range of civil aircraft in most sizes and types. The strength and diversity of their production pace, while attuned to the requirements of a multi-faceted market, have aided U.S. aerospace efforts to compete effectively in export markets.

The U.S. industry has an outstanding reputation for consumer service and has built an extensive product support network worldwide. The broad customer base and product support availability have in turn facilitated additional sales to new and repeat customers. While the Europeans have led most major technological developments in the jet era, our productive capacity, technology, and market orientation have resulted in U.S. market dominance. From 1954 to 1978 the Europeans produced ten different jet transports for a total of slightly over one thousand aircraft, compared to slightly over 5200 for U.S. manufacturers. No more than 280 of one type were ever produced by the Europeans.

All European programs before the Airbus were by any measure economic failures, largely paid for with government funds. However, with the introduction of Airbus by a four nation industry consortium, the Europeans have for the first time a competitive aircraft in both the current A-300 model and the new A-310. They are a very good head-to-head competitor with our manufacturers. At the moment, Airbus has 315 orders -- 232 firm and 83 options.

Where are these airplanes being sold? Primarily along what we call the silk route, from Europe through the Mediterranean countries, the Middle East, and on down through Australia. The only exceptions are the sale of Eastern in this country, four orders in Brazil, and five or six in South Africa.

Until now the Europeans have not been successful in cracking world markets. Most of their sales have been mandated procurements by nationalized airlines. Neither have they been competitive in establishing support bases. But here again, Airbus is different. All that has been changed. Airbus is generating a world-wide pattern of sales and developing prospects for major reorders. Thus, Airbus with U.S. engines, avionics and other components, which account for some 36 percent of the total value of the airplane, and with substantial European market support, is in position to obtain a sizable market position in the 1980's.

While the U.S. share of the commercial jet aircraft in airline service is 89 percent, the Airbus share of the wide-bodied market in the world in 1976 was about 3 percent. Today that stands close to 40 percent. The Airbus consortium is receiving government funding to study other possible aircraft designs, commonly referred to as the SA-1 and SA-2, meaning single aisle as opposed to the twin aisle layout of widebodied aircraft. Announcements of such a program could well come this year for an airplane of 150 to 160 seats.

An important dimension of the competition facing U.S. manufacturers, whether they produce general and business aviation vehicles, helicopters, commuter size planes, or large jet passenger aircraft, is that all of the foreign manufacturers are government owned, and receive regular government

funding for the development and production of the aircraft. In this country our antitrust laws prevent our manufacturers from getting together for joint efforts. The most prominent government-funded program for the development and production of a civil aircraft project, of course, is the Airbus, which is owned by four governments -- the British some 20 percent, close to 38 percent for the French, the same for the Germans, and the Spanish for slightly more than 4 percent. These governments are in turn supported by the Belgian and Dutch governments who fund many of the components and sub-assemblies for the A-300 and the A-310.

Japan has made an industrial policy decision to establish a civil aircraft industry, one that is to be competitive in world markets, and they are implementing that decision in every way possible. In 1973 MITI organized the Civil Transport Development Corporation, commonly referred to as CDTC. That is a consortium of several heavy industries such as Kawasaki and a few others, to undertake the so-called project, the Japanese share of the Boeing 767 program. In 1977, CDTC signed a provisional agreement with Boeing to develop and produce fuselage, wing rib, and other 767 components. In 1975, a group of heavy industry companies, also under MITI, organized an association for the study of aircraft turbine engine technology. They are now supporting those companies for about a 50-50 split with Rolls Royce, another government owned firm in Great Britain, to develop and produce what is known as the RJ-500 commercial jet engine of 10 to 13 tons thrust. This engine should be able to power an airplane of 130 to 150 seats, and its development is being escalated in order to have the engine available for the Boeing 737-300. In this morning's paper, Boeing announced it has a firm 737-300 program, with orders being placed by several of what used to be called regional carriers in this country.

As for jet engines in Europe, Rolls Royce has had very limited success in the large engine market, and has gone bankrupt. Government support, especially loan guarantees, has been essential to its continued participation in the market place, with the RB-211 for the current Boeing and Lockheed wide-bodied aircraft and the future Boeing 757. During 1979 Rolls Royce received \$71 million in working capital by selling additional shares to the United Kingdom's National Enterprise Board -- again government subsidy in one way or another. On the other hand, a U.S. firm, Pratt and Whitney, has invested something more than a billion dollars of its own capital in developing a new 37,000 pound thrust engine for Boeing's new 757.

Another major concern is the international agreement on trade and civil aircraft. Having identified a number of aircraft and engine programs that are directly benefiting from foreign government funding guarantees and other support, it is pertinent to ask what we are doing and what can we do to assure reasonably competitive opportunity for private enterprise manufacturers that do not operate on government support. The first point is that we need to establish a strong international standard for competitive practices. This we did in 1978 and 1979, in the Tokyo round of Multilateral Trade Negotiations, commonly referred to as the MTN, with the negotiation of the agreement on trade in civil aircraft. The preamble to that agreement sets forth the general policy objectives of establishing an international framework governing the conduct of trade in civil aircraft. Specific objectives include the operation of civil aircraft activities on a commercially competitive basis, and the elimina-

tion of adverse effects on trade resulting from government support of civil aircraft development, production and marketing. The United States sought first to establish commercial competition as the basis or standard on which the civil aircraft industry, worldwide, should operate, and second to focus attention on non-tariff issues. In the end our view prevailed, but there was a great deal of reluctance to have what the Europeans and Japanese refer to as fair and equal competitive opportunities as an expressed objective in the preamble.

What does the Aerospace Industries Association think should be done about some of these issues? We have a statement in which we set forth most of these, where we note that foreign competitors in the international market are often strengthened by government incentives, and even by government partnerships. If our government is to help meet this competition it must give sufficient national priority to exports and to effective implementation of policies and practices designed to increase sales in the international marketplace.

We see a need for export tax incentives to offset the tax advantages of our foreign competitors. For decades most developed nations have recognized that economic survival is critically dependent on exports. Accordingly, they have forged an array of incentives -- financing facilities and trade devices to assist their industries to promote exports and jobs and other economic consequences therefrom. Such supportive measures not similarly available to American exporters put U.S. industry at a distinct disadvantage in international competition. Specifically, we recommend an expansion rather than a reduction in the one principal program that we have available to us, commonly referred to as the DISC program (the Domestic International Sales Corporation). This is an effort to offset in part the tax advantages enjoyed by our foreign competitors. We would amend the U.S. tax system as a means of expanding exports, with emphasis on depreciation, investment tax credit, and other incentives helpful to the export community.

We also see a need for firm action against those countries that provide preferential credit terms or impose tariff or non-tariff barriers in violation of the MTN agreement. In countries where an industry is owned or controlled by its national government many important factors can be manipulated, not the least of which is financing of their foreign purchases; indeed they are being manipulated. This puts countries such as the United States at a distinct disadvantage.

We have many more recommendations but that is the overview. Attention should also be directed to a study that was recently done under the auspices of the National Research Council. Several months ago at Woods Hole it assembled a group of distinguished individuals to talk about aeronautical research and development. NASA of course was involved in this study. Here are three sentences from the news release of that report.

"The dominant world position of the United States aircraft industry may be in danger, according to a National Research Council Report on the National Aeronautics and Space Administration's role in aeronautics. Citing the erosion of the momentum in U.S. aeronautical technology, the report warns that opportunities during the next decade may favor a foreign competitor, if this country fails to maintain and improve its technological capabilities in

aeronautics. As foreign countries have increased their efforts on civil aircraft manufacturing, on advanced aeronautical research, and on expansion of their airlines, the United States has continued in a path that has increasingly constrained all three, stated the report, pointing out that 20 percent of the commercial transport market has been lost to European competitors over the last few years."

As for the diffusion of technology from the military, it has been reversed in the past decade from its direction before 1970. Prior to 1970 our industry realized great economic, technological and other benefits from military R&D. But the trend has shifted. The infusion or the transfer of technology has been more in the other direction for good reason. There has been a switch in military emphasis from aircraft to missiles. For remaining large-type military aircraft, technology transfer has been from civil to military. In addition, NASA's emphasis on space instead of aeronautics also has been a principal reason for the lack of transfer, or as much transfer, from military and space research as we had prior to the 1970's.

COMMUNICATIONS - TELECONFERENCING

Richard C. Harkness, Satellite Business Systems

Teleconferencing has become quite prominent in the trade journals and in many corporations, reflecting the thrust of the "office of the future." Teleconferencing comes in several varieties but this discussion will deal mainly with "videoconferencing." This contrasts with computer conferencing which is like electronic mail, and with audioconferencing which is like a speaker-phone conference call.

There is growing interest in teleconferencing for two reasons. One is the concept of saving travel fatigue, travel time, and direct dollars. However, the most important benefits will be productivity enhancement, faster and better decision making, altered organizational structure, and just better communications. In these ways, rather than being a mere substitute for travel, teleconferencing is really a supplement.

The history of teleconferencing goes back ten to fifteen years. The Department of Defense was active in the late 1950's and the New York banks had systems in the 1960's. A year ago there were about 50 organizations that had experimented with teleconferencing. There are probably over 100 today. Awareness in the business community and adoption on a pilot basis have been growing rapidly. There are new entrants such as Procter and Gamble, Hercules, Control Data, Aetna, United Technologies, Boeing, Exxon and others. However, teleconferencing has had an uneven, rocky history. There have been failures for a variety of reasons.

There are also a number of different technical approaches. Some have used audio, or audio with facsimile, while others employ still frame video or full motion video. Still frame is one of the newer key developments. Pictures or graphics can be sent at low cost.

Pictures of teleconferencing rooms give a feeling for what is actually going on. The Bank of America has a room in its headquarters in San Francisco, and a twin room in Los Angeles. This audio-only system has been working for over ten years, used for regularly scheduled committee