

# Commercial Aircraft Sales Should Not Require An Arms Export License

---

*Center for Strategic and International Studies*

*January 2004*

*By James A. Lewis*

---

Modern aircraft use sophisticated avionics equipment to help keep themselves stable and on course. Precise and reliable microprocessors, sensors and other electronic devices are widely used in both military and civil avionics. The avionics package on the Boeing 737 and many other airliners use a chip named the QRS11. This chip is also used in military aircraft and missiles. The use of this particular chip on a passenger aircraft means that an agreement to sell thirty new passenger aircraft to Chinese airlines was delayed while the U.S. government decided whether it must be approved as an arms sale. The sale is now being criticized for releasing military technology, but this charge has more to do with politics and out-of-control regulations than with national security and for allowing passenger aircraft to go to China without a license.

U.S. arms export regulations provide for very tight controls on the sale of military goods to other nations. This is the right approach for weapons and military equipment, but the regulatory process has become badly distorted. This distortion is the root of the charges regarding the aircraft sale. U.S. regulations, under what is known as the 'see-through' rule, state that if a component that is considered a military good by the U.S. is used as part of a larger system, the entire system becomes a military good. The effect of see-through is that if a large civil airplane or commercial satellite uses a small component the U.S. considers military, it becomes a military item whose sale needs U.S. government approval before it can go to a foreign customer, even if the larger system has no real military usefulness.

Most countries do not use a 'see-through rule.' A civil aircraft designed for commercial use and sold to a civil end-user would not require a military export license in Europe.

Additionally, most other countries do not consider as many components to be military as does the U.S. The effect is that the United States has a longer list (known as the U.S. Munitions List, or USML) than most other countries. The USML is crowded with many items that are not really military and should not be treated as such.

The USML contains a number of items that are components – parts that go into a weapon or that could improve a weapon's performance. Weapons contain many routine components that are not particularly sensitive or warlike. Deciding when something crosses the line and become military is hard for the U.S. The decision is easy when an item is built specifically for military use, but when an item can be used for either military or civil purposes, or is a civilian item that DOD decides to use, the decision becomes more difficult. Left to their own devices, the arms export bureaucracy would classify most items as military. Famous examples include rubber tubes, which are military when they are one length and civilian when they are another, communications satellites and, until 1998, commercial encryption software used for credit card purchases on the internet. The U.S. takes a very broad approach in deciding what items fall into

this category, with the result that a some product exported from the U.S needs government approval while a similar good exported from Europe or Japan does not.

The effect of this is to damage the U.S. industrial base and with it, national security. Most component manufacturers must sell to both the military and commercial markets. The arms market is no longer big enough to sustain component manufacturers who build and sell only to the military. When a U.S. component producer competes with a European or Japanese producer, and the U.S. producer needs government approval for each sale while the foreigner producer does not, the result is to drive U.S. companies out of business and shift production overseas. Foreign purchasers also look for non-U.S. sources of supply or to start to manufacture their own components. Ironically, export controls help to make us more dependent on foreign sources of supply.

Avionics components like the QRS-11 are regulated by many countries under a special set of rules developed by the Missile Technology Control Regime (MTCR). Missiles could use a chip like the QRS11 to achieve stable flight and be more precise in hitting a target. However, the MTCR says it is appropriate to export avionics equipment like the QRS when they are part of a manned aircraft – the assumption is that if someone really wants a chip for a missile, there are easier ways to get it than going through a multi-billion dollar aircraft purchase. The MTCR leaves it to the discretion of its member countries as to how they allow an export to go ahead. Not surprisingly, the U.S. takes the most complicated route. The U.S. approach is more restrictive than that of other countries – we justify this by saying we are leading by example – but no one follows an example widely regarded as misguided.

Congress decided in 1999 that any item considered missile technology could not be exported to China without Presidential approval (known as a ‘waiver’). Congress thought it was taking action against Chinese weapons programs. Chinese weapons programs have not been affected (their chief supplier is Russia), but the result is that for some export of commercial goods, like passenger aircraft, the White House and the Departments of Defense and State have to go through various contortions to satisfy the requirements of the law. In the past, sales of airliners have been allowed to go ahead without impediment. The reason this sale has run into trouble has more to do with turf squabbles than national security.

The squabble in question is between the Executive and Legislative Branches over who has the final say on arms sales. This is a long-standing battle that goes back to the 1970s. Arms sales have shrunk in size and importance since the end of the Cold war, but in Washington, the smaller the turf, the more bitter the fight for those few who remain interested. The current fight is over yet another effort to reform the U.S. arms export system, which is notoriously cumbersome and an impediment to both the economy and to national security.<sup>1</sup> The Bush Administration ordered a review of how the government decides on arms sales (in a document known as National Security Policy Directive 19, or NSPD-19) and instructed agencies to find ways to streamline the process. While the review has moved slowly and promises only incremental change, some would prefer no change at all and have seized on the aircraft sale to China as a useful tool to use against NSPD-19.

---

<sup>1</sup> A 2001 CSIS Study, “Technology and Security in the 21<sup>st</sup> Century: U.S. Military Export Control Reform,” explains some of the problems with the current system.

A letter in October from the Chairman and ranking minority member of the House Foreign Affairs Committee, which has jurisdiction over arms exports, chastised the Administration for its lax review of the proposed sale. Any review of a Boeing 737, no matter how cursory, would have revealed that it is a passenger aircraft and that the QRS11 is not going to Chinese missile programs, so it is hard to accept that this is the real motive for Congressional concern. Some have speculated that the announcement that the passenger jets would be reviewed as an arms sale was an effort by DOD to punish Boeing for its recent transgressions. This theory fails to take into account the political battle between Congress and the Executive, and the ability of the arms export bureaucracy to complicate and delay any decision. A more likely explanation is that State and DOD decided to try to propitiate the powerful committee by engaging in a long and meaningless review and by issuing new and confusing regulations for the QRS11.

It is not, of course, in America's larger national interest to have this battle. The harm does not lie in the potential loss of a \$1.7 billion sale, although that would be painful. It lies instead in the damage to U.S. aerospace leadership. While the U.S. has led in the manufacture of avionics, the QRS11 episode will encourage foreign avionics manufacturers to make their products more attractive. The U.S. no longer leads in the sale of passenger aircraft, and Airbus will benefit from the current fight. It can avoid U.S. regulatory hurdles if it makes sure not to use U.S. avionic systems. European manufacturers will seek to 'design out' U.S. components. Foreign purchasers of passenger aircraft may have been given another reason to not buy from the U.S. The long-term effect is to unnecessarily harm the U.S. aerospace industry – unnecessarily because despite 'see-through,' the 737 and the QRS11 it uses to fly are neither a military aircraft nor a missile.