International Affairs

Introduction

This is an article about aviation maintenance affairs, not the other type. Now that I have your attention I will proceed on. When I arrived in a HQ job as Chief of Manufacturing and Maintenance for Transport Canada, I reread my job description and confirmed that international policy in those areas was under my range of responsibility. Well it soon became a large part of the job and had many interesting challenges both nationally and internationally. International agreements have a great effect on the work of DOMs both in large and in small enterprises.

History

Credit for the majority of the text in italics belongs to the web based National Encyclopedia. The write up has been modified by this writer but the general history remains.

The first international civil aviation conference, held in 1910 and attended by European governments only, since transoceanic flight was then regarded as no more than a wild dream, was a failure. Almost another decade elapsed before an international convention, signed in Paris in 1919, created the International Commission for Air Navigation. The commission was to meet at least once a year and concern itself with technical matters. An international committee of jurists was also established, to concern itself with the intricate legal questions created by cross-border aviation. In 1928, a Pan-American convention on commercial aviation was adopted at a conference held in Havana to deal with problems then emerging as international flights became more frequent in the Western Hemisphere.

The tremendous development of aviation during World War II demonstrated the need for an international organization to assist and regulate international flight for peaceful purposes, covering all aspects of flying, including technical, economic, and legal problems. For these reasons, in early 1944, the US conducted exploratory discussions with its World War II allies, on the basis of which invitations were sent to 55 allied and neutral states to meet in Chicago in November 1944.

In November and December 1944, delegates of 52 nations met at the International Civil Aviation Conference in Chicago to plan for international cooperation in the field of air navigation in the postwar era. It was this conference that framed the constitution of the International Civil Aviation Organization—the Convention on International Civil Aviation, also called the Chicago Convention. This convention stipulated that ICAO would come into being after the convention was ratified by 26 nations. To respond to the immediate needs of civil aviation, a provisional organization was created and functioned for 20 months until, on 4 April 1947, ICAO officially came into existence.

In essence, the conference was faced with two questions: (1) whether universally recognized navigational signals and other navigational and technical standards could be agreed upon, and (2) whether international rules concerning the economics of air transport could be established. One group of countries, led by the US, wanted an international organization empowered only to make recommendations regarding standard technical procedures and equipment. In its economic aspects, these countries believed, air transportation should be freely competitive. One objective was to obtain maximum technical standardization for international aviation, recommend certain practices that member countries should follow, and carry out other functions. Countries ratifying or acceding to the convention thereby agreed in advance to conform to the greatest possible extent to ICAO-adopted civil aviation standards and to endeavor to conform to ICAO-adopted recommendations.

In Canada the first limited aviation regulations came into being in 1919, and was one page of rules, unlike the thousands of pages we now have. It was not long before far thinking political leaders recognized the need for regulations relative to the new form of transportation. The obvious areas to regulate were pilot and technician licensing, manufacturing and maintenance organizations, aircraft design, air traffic and aerodromes.

As with any new technology it was not long before the legal world noticed it, mainly because anything new brings both benefits and costs. Imagine the first lawsuit for someone being hurt by a person dropping an object from an aircraft. The rules of 1919 covered that type of incident. It was not long before business people and investors were looking for some form of operational licensing. Towns, cities and countries also saw new fund raising possibilities though both taxes and fees. So by the 1930s, the basic regulatory structure was in place. Of course

aircraft and their operators were soon crossing oceans and borders which brought about another series of challenges. We will now go on to take a look at more recent events with our main focus on the technical fields.

Recent History and Policy Drivers

Very early on the major aviation manufacturing nations began to set up a system of having their civil aviation regulatory body set national rules around aircraft design, manufacturing and maintenance. Like many nations Canada put the regulation of civil aviation under the Canadian Air Force which later became the Royal Canadian Air Force in 1924. By 1936 the federal politicians were convinced that civil aviation should be regulated by the federal department of transport, which by the 1980s had morphed into Transport Canada, which it remains today. The UK and the USA followed similar patterns. Due to the fact that the UK had a global empire during the formative years of aviation its ideas on such matters as technician licencing went worldwide. The US CAA's (which eventually became today's FAA) influence on the world discussions advanced rapidly after WWII when the USA became such a mighty aviation manufacturing and operating nation.

Differences in national political and social systems affected how countries regulated civil aviation and created the need for discussion on bridging the gaps. France, for example, based its safety culture around certifying organizations rather than technicians, however they did licence pilots. The USA and UK, having a more personal responsibility centered culture went towards certifying individuals in all fields including maintenance. After many years the influence of both the USA and the UK systems has created worldwide support for individuals being certified as a base for aviation safety and backed up by certified organizations in commercial aviation.

The evolution of civil aviation authorities seems to have taken a similar path in most countries. This is not surprising as international norms had already been set out for ocean navigation and certification and many aviation terms and ideas flowed from that.

Although some international agreements already existed a major push began in the 1980s to formalize many more, to facilitate aviation business and safety. It

was apparent that different countries adding on local design and maintenance requirements was hindering trade and could affect safety. So all aviation authorities began to review other countries' systems. In Canada's case, it began with a lot of work between the FAA and Transport Canada and followed by working with major European Agencies and the JAA. This pattern continued over to Asia where North American manufactures began to subcontract substantial portions of new aircraft offshore. The NAFTA treaty added Mexico to our list. The fact that aircraft, especially larger ones, can be flown to Hong Kong for maintenance was one example of why new maintenance agreements were needed.

The process was as follows. A Canadian company might enter into a new contract in a country. We, the regulator, would then meet with the other country's authority. If we believed enough work would take place over future years to justify the effort, we then began high level discussions on an agreement's content. Then after the high level review, our technical specialists in licensing, training and maintenance operations would review the laws and regulations and do on-site reviews of typical facilities. If this showed the other nation's regulatory body was incompatible with our own then we then could use our own inspectors to monitor the work, with the primary responsibility being vested in the company who let the contracts. In the major aviation countries this work usually led to a technical agreement which, in some cases, then lead to a formal state-to-state agreement. Personal licencing was one area that was carefully reviewed. As the years went by it turned out that a large part of the world follows the FAA model, supported by foreign FAA offices. The other model was the off-shoot of the British Empire model which was followed by Canada, Australia, and New Zealand and so on. Over the years the Canadian regulatory model became closely harmonized with US FAA model with exception of the AME system. The Canadian AME system and the USA IA/AP systems are structurally and philosophically very different, yet they meet similar standards and produce the same outcome. In Europe the European Union created a unified aviation safety oversight system based on each country's independent authority. This made individual country's reviews and negotiations rather difficult but most interesting.

How This Affects DOMs

DOMs today work in an international environment more than ever before. Parts and components a can be manufactured all over the world. A DOM has to have a reasonable understanding of the agreements that they must deal with including the documentation requirements. The major aviation authorities have tried to standardize aviation forms and certification requirements but subtle differences remain.

Our ability to rely on the quality and workmanship of aviation parts and aircraft rests on the agreements and the work done by our national authority. This allows us to conduct business worldwide and forms a baseline.

It would be naïve to think all countries have the same level of commitment to all the requirements. You still need to establish that "trust" factor by checking references and watching other people's experiences. Not all aviation countries are truly equal nor are all businesses equal, so caution is prudent. If however, you find anything abnormal or not up to standard inform your national authority, as they need to know and follow up. These agreements are based on reviews and a lot of trust. One famous US President said something to the effect, trust but verify. Good advice always.

Conclusion

My time working on these agreements was a time of meeting well qualified people from around the world, reviewing governmental systems and visiting many industrial sites. One should not take for granted the usefulness of the international agreements which allow us to function smoothly internationally. Make sure you understand the basic requirements of the agreements when purchasing aircraft or parts or when sending such items offshore for maintenance or modification. Remember that between ICAO standards and bilateral agreements, there are established procedures that cover operations, aircraft and component design, maintenance and manufacturing, as well as all the licencing of aviation personnel.

I have not gone into a great deal of technical detail in this article as that would fill volumes. I could tell many stories of the work and of conducting surveillance over

foreign operators working between countries but those are best left for hangar flying time.

You can do your part by ensuring you get the correct documentation and help your authority by giving then any feedback on failures. Remember to clearly and plainly document your requirements when working outside your normal framework. Remind yourself that while English is the worldwide aviation language, it is not everyone's first language, so care is needed to avoid many interpretation issues. Finally if you work outside your own country, enjoy the experience. It can be enriching and profitable.