International Phonetic Alphabet

Richard Skiba

All of us have heard of the phonetic alphabet (Alpha, Bravo, Charlie …) and many of us use it often. However, very few of us are aware of its origin and why we use it in the first place. It was originally formed for the pronunciation of single letters where they may be confused with each other especially over a bad communication channel. As an example, the letter B may sound like the letter V and vice-versa, the letter M may sound like N and the letter D may also sound like B. So the aircraft registration VH-DBV if not read back phonetically may sound like BBB in "This is DBV, a Cessna 152, 2 Passengers on board …". There is no question of the letters when stated as "This is Delta, Bravo, Victor, a Cessna …".

The most common version of the alphabet is referred to as the International Telecommunication Union, or ITU alphabet. It is also known as the NATO, International and Aircraft alphabet. It was developed after World War II and replaced the then commonly used Allied Armed Forces alphabet. The Allied Armed Forces alphabet was problematic in that it was based on the English language which used words which were not suitable in other languages. At the end of World War II, commercial aviation expanded significantly and rapidly and a phonetic language which could be used in a variety of languages and internationally was required. Based on that need, experts from a number of nations drew up word options which were available in as many languages as possible. These words were those which would be phonetically suitable and commonly available in as many languages as possible.

The ICAO (International Civil Aviation Organisation) adopted a version of the alphabet by 1952. As a background on the ICAO, the International Air Convention, which was signed by 26 of the 32 Allied and Associated powers represented at the Paris Peace Conference, in 1919, and was ultimately ratified by 38 States. This Convention consisted of 43 articles that dealt with all technical, operational and organizational aspects of civil aviation and also foresaw the creation of an International Commission for Air Navigation (ICAN) to monitor developments in civil aviation and to propose measures to States to keep abreast of developments. To assist the Commission, a small permanent Secretariat under the direction of a General Secretary was established. In December 1922 this Secretariat assumed its duties with Mr. Albert Roper from France as General Secretary and it was located in Paris, where it remained throughout its existence. Mr. Roper also became the first Secretary General of ICAO and the European Office of ICAO in Paris, on its foundation, took over the offices of the ICAN Secretariat and remained there for its first 19 years until August 1965.

One of ICAO's chief activities is standardization, the establishment of International Standards, Recommended Practices and Procedures covering the technical fields of aviation: licensing of personnel, rules of the air, aeronautical meteorology, aeronautical charts, units of measurement, operation of aircraft, nationality and registration marks, airworthiness, aeronautical telecommunications, air traffic services, search and rescue, aircraft accident investigation, aerodromes, aeronautical information services, aircraft noise and engine missions, security and the safe transport of dangerous goods. After a Standard is adopted, it is put into effect by each ICAO Contracting State in its own territories. As aviation technology continues to develop rapidly, the Standards are kept under constant review and amended as necessary. Further information on the ICAO may be obtained from their web site located at http://www.icao.int/, which was the source of information here.

A few minor changes occurred and the alphabet was adopted by the Allied Forces, then NATO (North Atlantic Treatment Organisation) and then finally by the ITU in 1956. This phonetic alphabet is generally a world standard, but is not compulsory in its application. Further, there are spelling variations within different languages and nations can use their own variations within their boundaries if they wish. The following is the basic NATO phonetic alphabet and the version used by Australian General Aviation:

A	Alpha		**N**	November
B	Bravo		**O**	Oscar
C	Charlie		**P**	Papa
D	Delta		**Q**	Quebec
E	Echo		**R**	Romeo
F	Foxtrot		**S**	Sierra
G	Golf		**T**	Tango
H	Hotel		**U**	Uniform
I	India		**V**	Victor
J	Juliett		**W**	Whiskey
K	Kilo		**X**	Xray
L	Lima		**Y**	Yankee
M	Mike		**Z**	Zulu

As an aside, the fundamental role of NATO is to safeguard the freedom and security of its member countries. It is one of the foundations on which the stability and security of the Euro-Atlantic area depends and it serves as an essential forum for transatlantic consultations on matters affecting the vital security interests of all its members. Its first task is to deter and defend against any threat of aggression against any of them. Information on NATO may be obtained from http://www.nato.int/# on the web.

With regard to the ITU, based on the expansion of telegraph networks in an increasing number of countries and the growth in the use , 20 European States decided to meet in order to work out a framework agreement. They also decided on common rules to standardize equipment in order to guarantee generalized interconnection, adopted uniform operating

instructions which had previously been different from one country to another. On 17 May 1865 after two and a half months of arduous negotiations, the first International Telegraph Convention was signed by the 20 participating countries and the International Telegraph Union was set up to enable subsequent amendments to this initial agreement to be agreed upon. This marked the birth of the ITU. The ITU Radiocommunication (or ITU-R) Sector was created on 1 March 1993 and comprises the former CCIR and IFRB (founded 1927 and 1947, respectively). ITU-R Sector is responsible for all ITU's work in the field of radiocommunications. Further information may be obtained from http://www.itu.int/home/index.html as was the source of information for this article.

Getting back to the phonetic alphabet, some of the interesting variations include a variation in spelling such as Alfa, Juliett Juliette, Oskar and Viktor. As an example, the above alphabet is reproduced from the Cambridge Encyclopedia of Language, where an alphabet with Alfa and X-ray can be found in the U.S. Department of Defense Dictionary of Military Terms. On the other hand, the ICAO version uses Alfa, Juliett and X-ray which can be found in A Concise Dictionary of Slang and Unconventional English and also in a Langenscheidt Dictionary. There are also a number of differences which may be found in the actual words used to represent the letters. As an example, an Indonesian phrase book shows Beta rather than Bravo, Ultra rather than Uniform and Volvo rather than Victor.

Some of the previously used alphabets will now be shown. These alphabets were in place prior to the ICAO, NATO and ITU endorsed International phonetic alphabet's development.

The phonetic alphabet as utilised by the British Forces around 1904:

A	Ack		**N**	N
B	Beer		**O**	O
C	C		**P**	Pip
D	D		**Q**	Q
E	E		**R**	R
F	F		**S**	Esses
G	G		**T**	Toc
H	H		**U**	U
I	I		**V**	Vic
J	J		**W**	W
K	K		**X**	X
L	L		**Y**	Y
M	Emma		**Z**	Z

The British Army in 1927 used the following:

A	Ack		**N**	Nuts
B	Beer		**O**	Orange
C	Charlie		**P**	Pip
D	Don		**Q**	Queen
E	Edward		**R**	Robert
F	Freddy		**S**	Sugar

G	George		**T**	Toc
H	Harry		**U**	Uncle
I	Ink		**V**	Vic
J	Johnny		**W**	William
K	King		**X**	X-ray
L	London		**Y**	Yorker
M	Monkey		**Z**	Zebra

Prior to 1954, the U.S. Navy Radio Alphabet was as follows:

A	Able		**N**	Nan
B	Baker		**O**	Oboe
C	Charlie		**P**	Peter
D	Dog		**Q**	Queen
E	Easy		**R**	Rodger
F	Fox		**S**	Sugar
G	George		**T**	Tare
H	How		**U**	Uncle
I	Item		**V**	Victor
J	Jig		**W**	William
K	King		**X**	X-ray
L	Love		**Y**	Yoke
M	Mike		**Z**	Zebra

As is demonstrated from the alphabets above, there is a significant difference in the representation of the letters from one alphabet to another and in absence of an International alphabet it would be difficult for International aviators. The difficulty would exist in remembering the variations from one nation to another and trying to communicate in the right way.

The major sources of information related to the phonetic alphabet for this article was the research listed at http://www.nor.com.au/community/sarc/phonetic.htm which is an excellent web site for further information on this topic.

Safe flying.

#