HUMAN FACTORS NEWS

THEME — COMMUNICATION

Human Factors Training
SOLUTIONS

Welcome

Welcome to the third Human Factors newsletter for 2012. This quarter, our theme is communication. Our feature accident is a positive example of where excellent communication played a significant role in potentially saving the lives of three young passengers.

As some organisations are now nearing 12 months since the program was launched, we will be contacting you (if we haven't already) to organise a customisation visit as a part of the recurrent program. It is a good idea to read through your CASA approved program and ensure you have ticked all the boxes. If you are unsure of what you need to have completed in this 12 month period, give us a call and we will talk you through it.

We are also introducing some new products in the new year which may be of interest to you. They include:

- Aviation incident investigation (classroom based 3 day course, at different locations around Australia)

- Introduction to SMS (online)

- Risk Management (online)

- Change Management (online)

- Human Factors for Ground Handlers (online)

- Human Factors for Engineers (online)

If you are interested in any of these training courses, please contact us.

When a pre-flight passenger brief really counts

On 12 September 2011, a Robinson Helicopter Co. R44 departed Heartbreak Hotel, Northern Territory, for a local scenic flight with one pilot and three 12 year old passengers onboard.

At about 1,500 ft the engine fire light illuminated and the pilot conducted a precautionary landing. After landing the pilot observed flames under the engine cowling at the rear of the helicopter cabin and ordered the passenger to evacuate. All three passengers exited the aircraft. The helicopter quickly became engulfed in flames and was ultimately destroyed in the fire.

So what makes this accident interesting from a communication point of view? ***Continued on page 2***

Image courtesy of the ATSB

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When a pre-flight passenger briefing really counts — *continued*

The pilot had noted that during previous flights, a lot of passengers appeared to have difficulty operating the doors and seatbelts, so he developed his own comprehensive safety briefing.

The brief included how to approach and exit the helicopter, both during normal operations as well as in emergencies. The pilot then demonstrated the use of the doors and seatbelts and had the passengers physically practice operating the doors and seatbelts several times prior takeoff.

The pilot also showed the passengers the location of the first aid kit, satellite phone, emergency locator transmitter (ELT) and additional water. He then showed the passengers how to turn the satellite phone on and enter the pin code to activate the phone. The pilot also showed the passengers how to activate the ELT.

It should be noted that this safety brief was above and beyond the company procedure and was conducted for a short scenic flight in a remote part of the Northern Territory.

The accident stood out, not only as an example of excellent communication, but also professionalism. I'm sure many of you have worked in hot, remote, uncomfortable parts of the world. When someone turns up to do a scenic flight that will only add 0.3 to your logbook, $20 to your pay cheque, but take 2 hours out of day, your level of enthusiasm may be described as limited at best. However this pilot, ensured that his safety brief was actually effective. He knew, before takeoff, that all of his passengers could open the emergency exits, operate their seatbelt and actually use the additional safety equipment on board.

I'm sure many of us would have demonstrated the use of the seatbelt, but not actually asked passengers to show us how they do it. Or we may have pointed to the satellite phone, but not mentioned there was a pin code to operate it, because really, how likely is it that they will need to know this information?

Well, this accident proves that for some people the day will come, where they have three young people on board and they need to evacuate in a hurry.

This accident offers a good opportunity to reflect on your own communication style. Is it one that is merely compliant or are you actually being effective?

> **Is your communication style one that is merely compliant or are you actually being effective?**

> **"Mumbai, what number am I in the landing sequence?" "By the time you land, sir, you will be number one."**

Small omission - big consequence

On the 9th of December 2011, a S.O.C.A.T.A Groupe Aerospatiale TBM 700 aircraft departed Bankstown on runway 11 left for Merimbula. The flight was operating under IFR rules, however a clearance was given for a visual departure due to airspace congestion at Sydney.
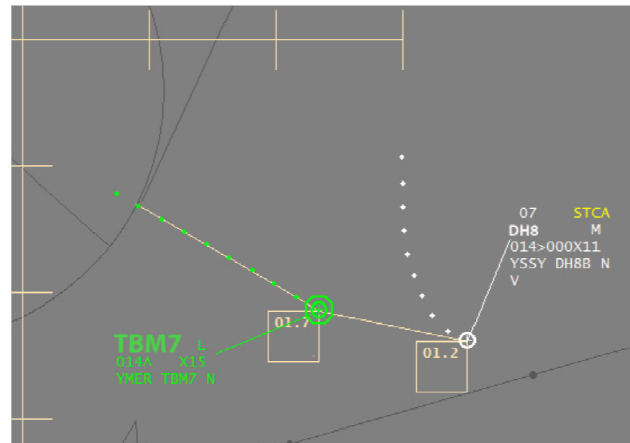
The Bankstown Tower controller issued a clearance to take-off on runway left (but didn't mentioned the runway direction), followed by a left turn onto downwind on climb to 1,500ft. The pilot read back the clearance to depart downwind, but omitted the direction of turn. This was not clarified by the tower controller.

The aircraft subsequently departed Bankstown airport on an extended upwind leg instead of downwind, as issued in the clearance. The aircraft penetrated Sydney controlled airspace by 2.3 NM and came within 1.2 NM (at the same altitude) of a DHC-8 on final approach for runway 07 at Sydney.

The pilot later recalled that he believed he had been given a clearance for an upwind departure.

The ATSB report stated that the incident highlighted the importance of writing down a clearance, especially when operating at an unfamiliar aerodrome. The report also mentioned the correct and complete clearances and readbacks are essential and if any ambiguity exists from either party, clarification should be sought.

Green aircraft represents the TBM at 1,400ft, 1.2NM from the DHC-8 at the same altitude.

Image courtesy of the ATSB

Organisational communication

Communication skills aren't limited to the individual. It's important that organisations communicate effectively as well.

Recently CASA issued an SMS resource kit to provide a practical guide to operators to improve an existing SMS or implement a new one from scratch.

The kit includes a booklet on safety promotion which highlights the importance of safety communication within the organisation.

This kit provides the following advice:

Topics for safety promotion campaigns can be based on:

- Past events or near-misses

- Identified hazards/potential hazards, especially those reported by employee to reinforce the value of reporting

- Observation from routine internal safety audits

The booklet also lists effective ways of distributing this information, including:

- safety bulletins

- safety notices

- posters

- CDs, DVDs

- newsletters

- briefings or toolbox talks

- seminars and workshops

- refresher training

- an intranet

Have a think about how safety information is currently communicated in your organisation. Do you have any suggestions for how it can be improved?

History of communication

3500 BC	The Phoenicians develop an alphabet.
1775 BC	Greeks use a phonetic alphabet written from left to right.
1400 BC	Oldest record of writing in China on bones.
1270 BC	The first encyclopaedia is written in Syria.
900 BC	The very first postal service - for government use in China.
776 BC	First recorded use of homing pigeons used to send message - the winner of the Olympic Games to the Athenians.
530 BC	The Greeks start the very first library.
500 BC	Papyrus rolls and early parchments made of dried reeds - first portable and light writing surfaces.
100	First bound books
305	First wooden printing presses invented in China - symbols carved on a wooden block.
1450	Newspapers appear in Europe.
1714	Englishmen, Henry Mill receives the first patent for a typewriter.
1814	Joseph Nicéphore Niépce achieves the first photographic image.
1821	Charles Wheatstone reproduces sound in a primitive sound box - the first microphone.
1831	Joseph Henry invents the first electric telegraph.
1835	Samuel Morse invents Morse code.
1843	Samuel Morse invents the first long distance electric telegraph line.
1887	Emile Berliner invents the gramophone - a system of recording which could be used over and over again.
1894	Guglielmo Marconi improves wireless telegraphy.
1898	First telephone answering machines.
1902	Guglielmo Marconi transmits radio signals from Cornwall to Newfoundland - the first radio signal across the Atlantic Ocean.
1910	Thomas Edison demonstrated the first talking motion picture.
1916	First radios with tuners - different stations.
1923	The television or iconoscope (cathode-ray tube) invented by Vladimir Kosma Zworykin - first television camera.
1925	John Logie Baird transmits the first experimental television signal.
1934	Joseph Begun invents the first tape recorder for broadcasting - first magnetic recording.
1938	Television broadcasts able to be taped and edited - rather than only live.
1939	Scheduled television broadcasts begin.
1944	Computers like Harvard's Mark I put into public service - government owned - the age of Information Science begins.
1948	Long playing record invented - vinyl and played at 33 rpm.
1951	Computers are first sold commercially.
1971	The computer floppy disc invented.
1979	First cellular phone communication network started in Japan..
1981	First laptop computers sold to public.
1985	Cellular telephones in cars become wide-spread.
1994	American government releases control of internet and WWW is born - making communication at lightspeed.

Note that technology has progressed at an incredible rate—it's now up to humans to adapt and keep up!

Final word...

> The single biggest problem in communication, is the illusion that is has taken place ~
>
> **George Bernard Shaw**

"Didn't you get my e-mail?"