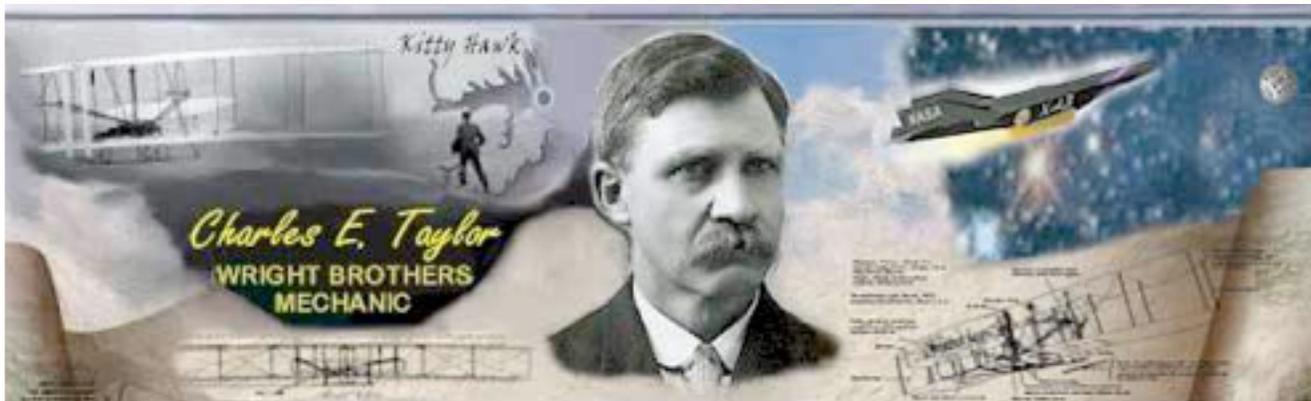


Aviation Human Factors Industry News

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From the sands of Kitty Hawk, the tradition lives on.

Hello all,

To subscribe send an email to: rhughes@humanfactorsedu.com

In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

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Failure to Communicate

According to Circular 253 from the International Civil Aviation Organization (ICAO), safety standards would be difficult to maintain without **communication** among maintenance managers, manufacturers, dispatchers, pilots, the public, the government, and others. Communication with the aircraft manufacturer and between airlines is critical. If an operator **discovers a problem during maintenance**, then it is the operator's responsibility to inform the manufacturer and other operators of the same aircraft type.



The ICAO gives the example of the DC-10 accident at Chicago in 1979. This occurrence “revealed that another airline had been using the same unapproved engine change procedures, in which the pylon and engine were removed and installed as a unit rather than separately. Unlike the accident airline, however, the other airline had discovered that the **procedure caused cracks** in the pylon attachment area. It is believed that if this experience had been shared with other operators of similar aircraft, the accident at Chicago might not have happened.”

The skills needed

George Bernard Shaw says that the **single biggest problem in communication** is the illusion that it has taken place

Good communication can help clear up any misinterpretations of new manuals, service bulletins, job cards, and other information provided to operators. When discussing these matters to resolve any issues, it is vital that **maintenance workers** use good communication skills.

ICAO encourages everyone – in any situation – to listen, think, and speak. Those are the three major parts of verbal communication and all are essential for you to get your message across. You have to think about what to say and speak your piece clearly in order for the listener to understand the message.

It's not just what you say ...

When you speak to a co-worker, make sure to think about your posture, gestures, eye contact, and inflection. All of these can **overshadow** your message. Picture this: someone tells you that they love your idea. Now picture the person saying this to you while they are slumped over with their arms folded – then they roll their eyes and throw up their hands. All of these **nonverbal cues** will lead you to believe that they don't appreciate your idea or the work and time you put into coming up with it, even though their spoken message was positive.

It goes both ways

True communication is a two-way street. Make sure you listen to the response you get after you speak. Instead of using the time the other person speaks **to come up with what you will say in return**, tune in to their message. Make sure you understand what is being said to you so that you and the other person can continue to move forward in the conversation and learn from each other's statements.

USAIG advises you not to be a fast talker or to try to monopolize the conversation. Make sure that your communication is truly a give-and-take situation. Be correct and concise in your wording to make your message clearer.

Go forth and communicate

Greek philosopher Epictetus said that “We have two ears and one mouth so that we can listen twice as much as we speak.”

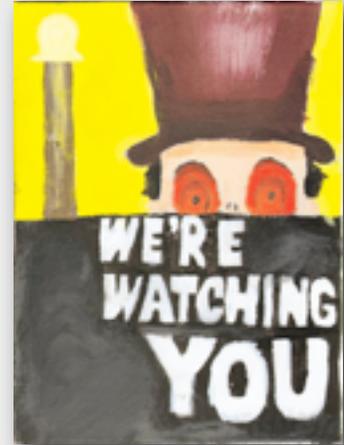
Listen to your co-workers and management, pay attention to the manuals and documentation that helps you do your job, and ask clear questions when you don't understand.

When you have a failure to communicate, it represents a **lack of effort to work together**, and it could lead to an unsafe situation that puts lives at risk. Are you willing to bet your certificate on that?

Broadcast Safety Improvements

Do your workers see you as someone trying to **impede** their progress? Or do they see you as someone **dedicated** to a safer work environment, fighting for everyone's safety every day?

To create a **vibrant safety culture**, your workers need to see and feel the company's commitment to providing a safe and healthy work environment. Let workers know when improvements or changes have been made in the name of safety. This will demonstrate management's dedication to safety.



United States Society of Air Safety Investigators 2010 Seminar "Learning From Investigations"

The United States Society of Air Safety Investigators (USSASI) is pleased to announce the 2010 USSASI seminar! This two-day seminar (June 21-23) at the National Aircraft Accident Investigation School, Oklahoma City, OK, is intended to provide **air safety professionals** an opportunity to update professional knowledge and network with other air safety professionals.

Attendees have the opportunity to participate in one of **three breakout sessions!**

Choose from General Aviation, Commercial Aviation, or. Presenters are current investigators and air safety professionals who will share their **lessons learned** and discuss accident trends over the last decade, case studies, and current issues.



Three workshops will also be offered to provide attendees an opportunity to enhance their skills and develop a few new ones! Attendees will choose one of three workshops: Bloodborne Pathogens, Crash Survivability/Emergency Evacuation, or Aircraft Crash Laboratory/Boneyard.

Lunch and coffee breaks will be provided on Tuesday and Wednesday. Tuesday evening is free night. Business casual attire recommended.

For more information, please click here

<http://www.rotor.com/rotornews/May%2010/USSASI%20Registration-2.pdf>

3 Ways to Build Your Safety Culture

You want to create a **culture of safety** at your workplace. But beyond holding safety meetings, what can you do? Here are three tips to help:

1. Walk the Talk. You can't persuade others to adopt a safe attitude if you have one yourself. Be a role model. Conduct job safety analysis for every task you perform and every task you ask others to perform. Wear your PPE, **don't take shortcuts** and don't hesitate to stop a job if you deem it unsafe. And don't restrict safety to the workplace. Safety is an inherent belief that follows you everywhere. At home, wear PPE when you use a power tool and watch for overhead power lines when you fix your roof. Demonstrate a **safe attitude** and pass it on to your children and neighbors. When safety is a part of every one of your routines, others will begin to believe in it too.

2. Involve the Opinion Leaders. In every workplace, there are employees who influence the attitudes of others, usually in an unofficial capacity. They're the ones that other workers turn to for advice, and for hints on **how to interpret workplace rules**. Enlist these influential people. Let them know that your objective is to reduce injuries and fatalities. Let them know that their co-workers are in danger - and they themselves are in danger - and that **a safe attitude** is the best form of protection.



But it can't be bought, it can't be worn, it can't be delegated. **It must be adopted.** Include these leaders in the job safety analyses. Invite them to be volunteers at the safety meetings, to share their experiences and to mentor new employees.

3. Record and Reward. Measure your workplace's safety performance and discuss the results at **safety meetings**. Show workers that safety practices are effective and reward their successes.

Creating a culture of safety requires the **personal commitment** of everyone involved. It might take some time, but the accidents averted and lives saved are worth the effort.

ATSAP Program Shows High Number Of Air Traffic Errors

FAA Program Allows Immunity For ATC Employees Who Report Safety Lapses

A program instituted 18 months ago by the FAA has reportedly **revealed a high number of air traffic errors** that might have previously gone. The Air Traffic Safety Action Program (ATSAP) was instituted by the FAA to allow air traffic controllers to point out **safety lapses** with a guarantee of immunity as whistle blowers.

According to a report in USA Today, more than 14,000 incidents have been submitted to the automated, online system since the program began.

The weekly report for March 29th, the most recent available online, shows that 5,711 of the 6,372 controllers registered to use the system have made at least one report of a **perceived safety issue** since the program began. The report indicates there are 14,867 FAA employees who are eligible to register to participate in the reporting program.

Most of the incidents reported the week of March 29th were for Loss of Separation between aircraft, followed by the category "Unsafe Situation."

The monthly reports break down the data further, analyzing reported events by facility type, top contributing factors, and other criteria. The monthly documents also highlight some specific issues and offer solutions.



For instance, in once case an En Route controller cleared an aircraft to descend to 2500 feet which s/he believed was the Minimum Safe Altitude (MSA) for the particular area. The Minimum Safe Altitude Warning (MSAW) alerted at 2900 feet. The overhead charts depicted 2500 feet as the MSA. The controller **was not aware** that the MSA had been raised to 2900 feet a week earlier. As a result, the ERC (Event Review Committee) communicated the issue and **the charts were updated** accordingly.

"This is a way for us to get new sets of eyes and ears in a lot of places," FAA Administrator Randy Babbitt told USA Today. "I think everybody agrees there will be a safer system in the long run."

There has been some controversy associated with the program. Some question the advisability of granting immunity to controllers who make serious errors. But FAA officials say the trade off is greater knowledge about risks, and NATCA safety chairman Steven Hansen says the union membership has been quick to embrace the system.

FAA Expands Air Traffic Education Program

Five Additional Colleges And Universities Open ATC Programs

Students considering a **career as an air traffic controller** now have choices as to where they might like to go to school. The FAA announced recently that **five new colleges and universities** will be part of the Air Traffic Collegiate Training Initiative (AT-CTI). This is the third year the FAA has added schools to the AT-CTI program bringing the total number of schools participating to 36. The FAA AT-CTI program was first established in 1990 at Minneapolis Community and Technical College. The program helps recruit candidates for terminal and en route air traffic controller positions. Twenty-one institutions submitted applications early last year to join AT-CTI. The applications were evaluated based on the school's organizational foundation and resources, organization credibility, air traffic basic curriculum and facilities.



The five schools joining the program are: Sacramento City College, (Sacramento, CA), Florida Institute of Technology College of Aeronautics (Melbourne, FL), Texas State Technical College (Waco, TX), Western Michigan University (Battle Creek, MI), and Hesston College (Hesston, KS).

CTI institutions are not given federal funds to teach air traffic control courses, however the FAA **does provide curriculum and instructor notes on air traffic basics**. The institutions independently incorporate the material into their aviation programs.

The AT-CTI curriculum provides appropriate education, experience, and training which meet the basic requirements for the terminal and en route air traffic occupations. As a result, AT-CTI graduates may be permitted to bypass the initial five-week air traffic basics training when they report to the FAA Academy in Oklahoma City.

No jobs are promised to students, but from fiscal years 2005 until 2009 **over 3,000, or 41 percent**, of the air traffic controllers hired graduated from an AT-CTI school.

To Sleep with Spouse or Not

Do couples sleep better alone or when they are together in the same bed? When measured objectively, such as the number of awakenings during the night, people's sleep tends to be **more disturbed** when there's another in the bed.

However, if you ask a person when they get their best sleep, they are more likely to say they sleep better when they are with their spouse or partner. The difference between the objective and subjective answer could reveal that there is something beneficial to sleeping with a partner that goes beyond just sleep quality, such as making a couple feel closer.

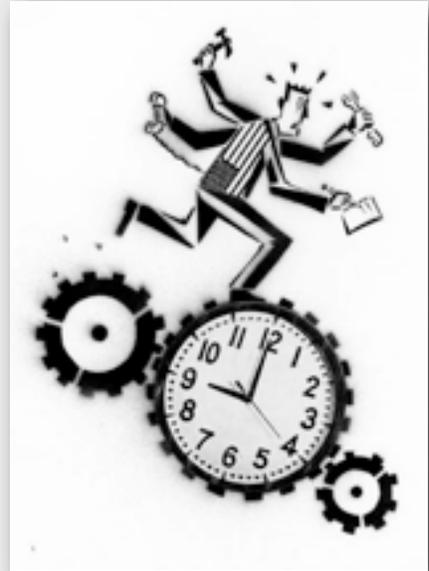
Studies show that **77% of couples share a bed**. The most common reasons for not sharing a bed include **different work schedules**, different sleep schedules, snoring, and other sleep disturbances.



Shiftwork Tip: Managing Overtime

Tuition for kids in college, home repairs bills, saving for retirement, fears about job security... These are just a few of the reasons why shiftworkers work overtime. Plus, the extra pay often provides you a little cushion so that you can buy something special or to do something fun without the bank.

Overtime is beneficial for both the employee and the company. It gives the company the flexibility to meet sudden increases in demand without hiring more employees. And it gives the employees extra income at premium rates. However, overtime has its downsides too. Lets review some best practices for shiftworkers when it comes to managing overtime.



AVOID The Overtime Trap.

- 1) **Becoming financially dependent on overtime pay.** From an employee perspective, the number one benefit of overtime is the increase in pay. And while there's nothing wrong with enjoying some of the hard-earned overtime money on some extras, be careful to not fall into the trap of having to rely on overtime pay just to support your life-style. The danger with coming to expect overtime work is that the availability of overtime often fluctuates greatly in any operation. When a company starts limiting overtime people who depend on the overtime pay to pay their 'regular' expenses find themselves in a hole and short of money in a given month.
- 2) **Watch out for Fatigue.** The more work we try to do and the more overtime we pull, the more likely we are to skimp on sleep. For example, given the choice, most of us are more likely to skip some sleep than to miss out on a family event or a chance to hang-out with friends. The danger of reducing or sleep time is that we accrue a 'sleep debt' and put ourselves at risk of having a fatigue related accident at home or on the job.

Additionally, keep track of your overtime hours by night and day shift. Because the human body experiences a low-energy ebb between 3 a.m and 6 a.m., working overtime during the overnight hours can be harder on the body than working overtime during the day. Keep in mind that if you're being called in to work a lot of overtime at night, you might be more susceptible to making errors caused by fatigue.

How much overtime?

How much overtime is too much? While the answer depends on many factors, including the individual and the requirements of the job.

For example, as you get older you might find it harder to work the same amount of overtime as you did when you were younger. Likewise, it might be necessary for someone working in a safety sensitive position or someone whose job requires a lot of physical labor, to work less overtime than someone working another job.

A good habit to develop is to assess how you feel before, during and after working overtime. Before working overtime, do you feel physically and mentally ready for the job? When you're working overtime do you find yourself yawning and becoming more fatigued than usual? And after working do you have enough time to recuperate (i.e. get enough sleep, rest muscles and relax the mind). The answers to these questions can help you gauge if you're working too much overtime or not.

But I Have To Work....

Overtime is regularly built into many schedules. While this accounts for some overtime, the majority of overtime is optional for most workers. Many of us feel like we let down the team if we turn down overtime. But it is important to make sure we take overtime only when it is safe and healthy for us to do so. Working overtime hours when we don't feel alert and able to do the job safely and efficiently can be bad for you , your fellow employees, and the company.

Tips

Here are a few tips for managing overtime:

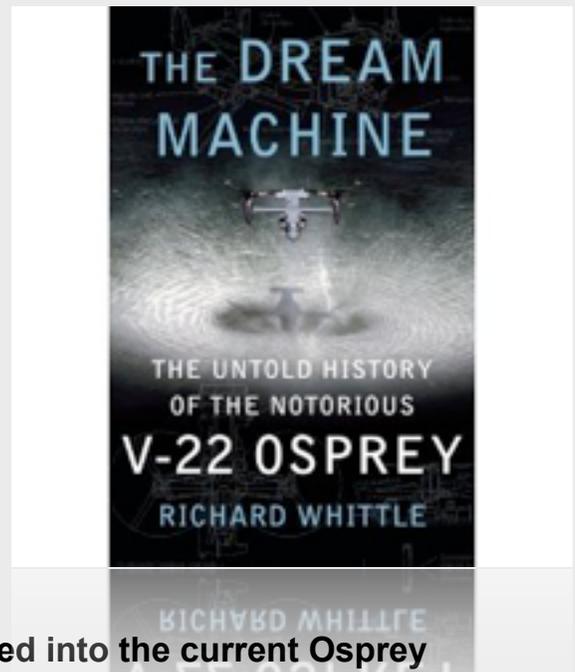
- **Be realistic about the amount of overtime you can handle. Remember to assess how you feel before, during and after working overtime.**

- Make getting enough sleep a priority, especially during times when overtime levels are high.
- Try not to over-commit yourself socially.
- Budget your household spending to reflect regular pay, rather than on additional overtime pay.

Osprey Crash -- The Aircraft And Its Legacy

The first fatal crash of an Air Force CV-22 Osprey in Afghanistan, this April, served as a reminder of the **aircraft's costly and deadly development**, but comparing the current aircraft to the development aircraft may be an apples-to-oranges comparison. There is a newly released book authored by Richard Whittle, "The Dream Machine: The Untold History of the Notorious V-22 Osprey." In the book Whittle explains the problems encountered during the Osprey's development, the deadly crashes it experienced, and how the government's own development process may have contributed to those problems. Today, Whittle believes the physical lessons of the Osprey's development have been incorporated into the current Osprey airframe, along with its hardware and software. But the aircraft's reputation in the general public may not have similarly evolved. And the government **may have yet to incorporated the lessons learned**.

Today, the Osprey has served in both Iraq and Afghanistan and has safely flown more than 8,000 flight hours dispersed over more than 100 aircraft already delivered. Still, its long and very expensive development was as public as the fatal crashes that killed 30 people during the Osprey's testing. And the aircraft's 68-percent readiness level in Iraq leaves ample room for improvement. As the aircraft continues to serve quietly in Afghanistan, and the U.S. government seeks to tighten its belt, the aircraft's more public history may prove hard to shake.



Nuts best well munched

The next time you're looking for a **snack**, reach for some nuts and try to chew them thoroughly. Purdue University researchers asked volunteers to a large handful of almonds (2 ounces) a few at a time. The volunteers felt more full, and lasted longer before becoming hungry, when they chewed each mouthful **40 times rather than 25 or 10 times** (American Journal of Clinical Nutrition, March 2009)



Chewing apparently releases healthy fats and other nutrients that would otherwise sail untouched through the digestive tract. This is one of a long line of studies showing that **nuts can play a role in good health**.

At the National Institute of Food and Nutrition in Warsaw, Poland, researchers asked volunteers to help with a different test: Eat a 5-ounce bag of chips every day. After four weeks, markers of inflammation were significant higher than they were before the chip marathon (American Journal of Clinical Nutrition, March 2009).