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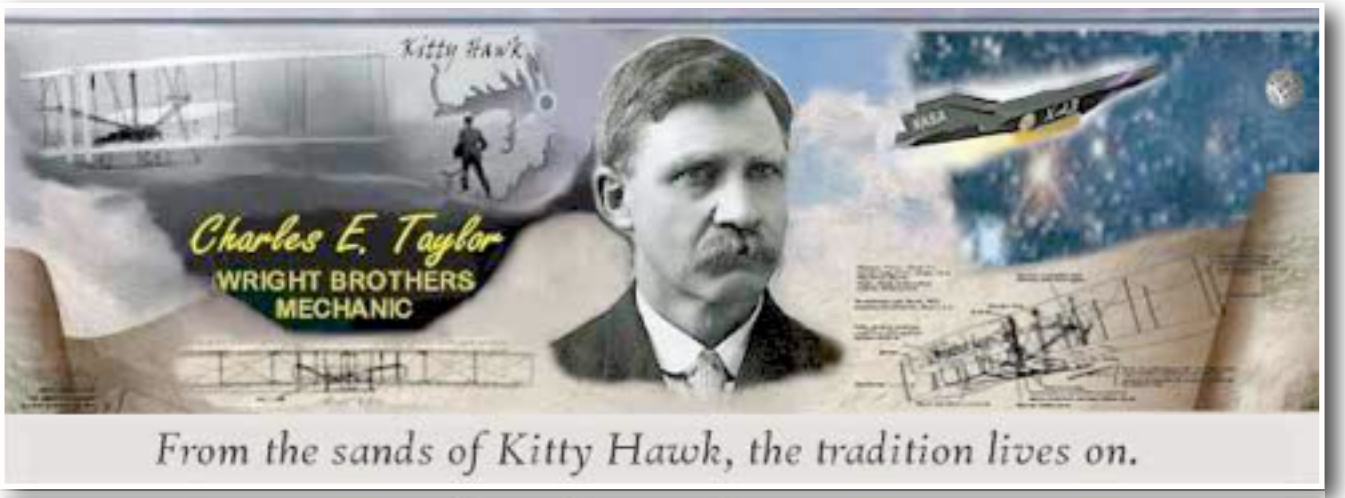

Hello all,

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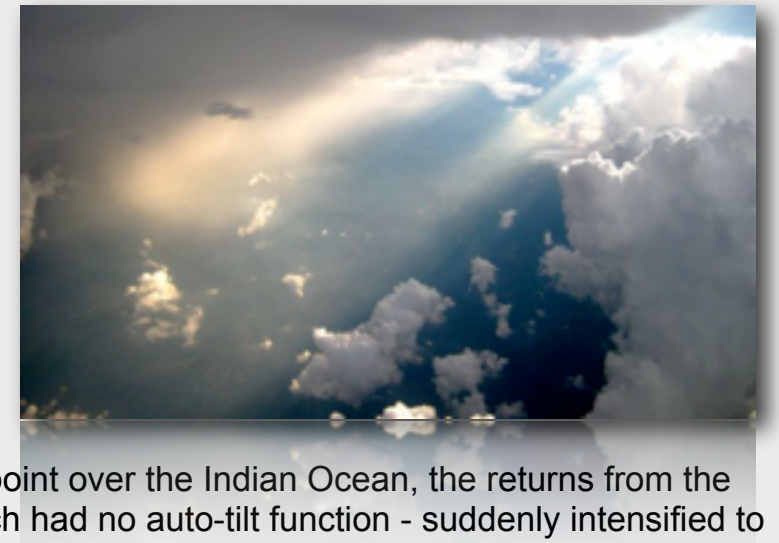
In this weeks edition of *Aviation Human Factors Industry News* you will read the following stories:

Storm ice suspected in Etihad A340 cruise incident



Pilots of an Etihad Airways Airbus A340-600 diverted to Singapore after a sudden encounter with turbulent weather during cruise generated unreliable airspeed data and left the jet unable to maintain altitude separation requirements.

While en route to Melbourne at 35,000ft, and approaching the PIPOV waypoint over the Indian Ocean, the returns from the aircraft's weather radar - which had no auto-tilt function - suddenly intensified to indicate surrounding convective weather.Airspeed on the captain's primary flight display rapidly dropped from 283kt to 77kt before fluctuating, and the standby instrument recorded a fall from 280kt to 142kt. The first officer's reading stayed stable.

United Arab Emirates investigators from the General Civil Aviation Authority determined that the autopilot and autothrottle, as well as the flight directors, disengaged and the A340 switched to alternate flight-control law - a mode in which angle-of-attack protection is lost.

The preliminary inquiry says that the aircraft had started to depart from its altitude after the autopilot disengaged, performing an "inadvertent climb" which took it 832ft above its assigned 35,000ft cruise level.

Within about 20s the airspeed indications recovered and the jet reverted to normal law. But about a minute after the initial disturbance began, the airspeed began fluctuating again. This second disturbance, lasting about 44s, again caused the A340 to drop into alternate law and disconnected the autothrust.

Since the first officer's instruments appeared to be functioning correctly, the captain designated him as the flying pilot. The first officer returned the aircraft to its assigned altitude.

Although the airspeed indications stabilized, and the autothrust was re-engaged, the crew could not bring the autopilot back online, and the first officer continued to fly the jet manually. The A340 remained in alternate law for the rest of the flight.

The crew transmitted that the aircraft (A6-EHF) could not maintain altitude owing to the jet's performance and the turbulence, and that it had lost the capability to operate in reduced vertical separation minima airspace.

It subsequently descended to conventional airspace at 29,000ft and diverted to Singapore. None of the 295 occupants was injured.

While the inquiry into the Etihad A340-600 incident highlights that icing is notably a cause of unreliable airspeed indications at high altitude, it has yet to establish conclusions about the event.

But the circumstances bear a similarity to those preceding the Air France flight AF447 accident in June 2009, when a A330 cruising at 35,000ft flew into a storm cell, suffering icing of its pitot system.

The General Civil Aviation Authority says that dispatch documentation provided to the Etihad crew included charts indicating an isolated embedded cumulonimbus cloud up to 45,000ft in the area of the incident.

Analysis showed that the A340's weather radar, set on manual tilt, showed "almost no" reflectivity before the turbulence started to increase. The radar returns then sharply intensified.

"An incorrect tilt may lead to only scan the upper, less reflective, part of a cell," the inquiry notes. "As a consequence, a cell may not be detected or may be underestimated."

Use of weather radar to avoid storm-cell penetration emerged as an issue in the AF447 investigation. Icing led to airspeed fluctuations and switching to alternate control law, and the crew's response resulted in an advertent climb and high-altitude stall.

Like the case of AF447, three pilots - one of whom had returned to the cockpit after a rest period - worked to resolve the Etihad situation. Despite resetting all the flight-control and flight-guidance computers, as well as other systems, by using quick-reference handbook procedures, the pilots could not re-engage either of the two autopilots.

Ex-mechanic pleads guilty in airplane inspection fraud case

An Elizabethtown man has admitted in federal court that he took part in an inspection fraud scheme at a former airplane mechanical repair business in Marietta.

Joel Stout, 32, pleaded guilty Tuesday to seven counts of conspiracy and mail fraud charges.

Stout was an airplane mechanic at Flying Tigers, Inc. and performed annual inspections on aircraft between October 2006 and October 2009, even though his inspection authority certification had expired on March 31, 2006, according to federal prosecutors.His father, Jay Stout, the president of Flying Tigers, and Howard Gunter, a retired FAA examiner, are also charged in the scheme.

Prosecutors said Stout and his conspirators forged the signature of a certified mechanic as having performed inspections, and arranged for Gunter to sign off annual inspections despite the fact that he did not perform the inspections.

The fraud also included billing customers for the inspections that were not properly certified, prosecutors said.

Joel Stout faces a possible statutory sentence of 20 years in prison for each mail fraud count and five years in prison for the conspiracy, plus a fine of up to $1.75 million, when he is sentenced June 24.

Pilot Falls Out Of Airplane

Authorities have found the body of a pilot who fell out of a Zenith 601 aircraft at about 2,500 feet over East Brainerd, Tenn., just east of Chattanooga.

The man was not identified but the latest reports suggest he was an experienced pilot who had recently purchased the aircraft and was being trained to fly it by another pilot. "At some point during their flight, the canopy on the aircraft malfunctioned and, as a result, one of the pilots was ejected," Bradley Gault, a spokesman for the Bradley County Sheriff's Office, told local media.

The nature of the malfunction was not detailed. Zenith 601s generally have a bubble canopy that opens forward. Authorities are not offering any speculation either on the attitude of the aircraft or the use of safety restraints at the time the pilot was separated from the aircraft. The other pilot was able to return to Collegedale Airport and land safely.

NTSB probes S-76A crash during maintenance check flight

An investigation continues into the cause of a Sikorsky S-76A++ operated by Era Helicopters that crashed within 30min of take-off on a maintenance check flight.

The wreckage of the crash that killed all three crew revealed two tail rotor blades were missing, says the National Transportation Safety Board (NTSB). The rotor blades have not been found and possibly separated from the aircraft during the flight. The helicopter crashed about 8km (4.3nm) from the threshold of runway 33 at Lake Charles Regional airport, Louisiana.

The crew was returning to the airport and cruising at 1,000ft (305m) when the pilot declared an emergency to the airport control tower, states the NTSB. The pilot said he would be "immediately landing off the airport".

The S-76A++ - serial number 760369 - was manufactured in 1990.

Dreamliner Flaw Escaping FAA No Surprise in Crash Data

Failures to spot and anticipate safety flaws during certification of new aircraft have been linked to 70 percent of U.S. airline-crash deaths in the past 20 years, according to data compiled by Bloomberg.

Boeings Co.'s tests concluding the lithium-ion batteries in its 787 Dreamliner couldn't catch fire are renewing questions about whether complexity of new aircraft can outpace manufacturers' and regulators' ability to spot shortcomings during design and certification.

"We don't know what we don't know," Bernard Loeb, who retired as head of the U.S. National Transportation Safety Board's aviation division in 2001, said in an interview. "We're still highly dependent on the knowledge and capability of the human being, and human beings are fallible."

Improved certification standards have been one reason there hasn't been a fatal U.S. crash involving a major airline since 2001, NTSB Chairman Debbie Hersman said in an interview.

"But there are occasions where those assumptions are incorrect or not conservative enough," she said. Hersman declined to comment on the current investigation.

In the absence of regulations for planes and components using new technology, the U.S. Federal Aviation Association creates rules known as "special conditions," as it did in certifying the Dreamliner's batteries in 2007.

That approval, which the NTSB will examine at a hearing next month, illustrates the need to modernize standards for approving new aircraft, Kevin Hiatt, president of the Alexandria, Virginia-based non-profit Flight Safety Foundation, said in an interview.

Deadliest Crashes

The manufacturer is confident in its 787 battery fix proposal and expects the plane to resume flights soon, Boeing Chairman and Chief Executive Officer Jim McNerney said at a conference in Washington recently.

Boeing plans to conduct a flight test with the revamped battery within days, McNerney said.

The history of airline accidents since 1993 is dominated by cases in which manufacturers and aviation regulators didn't foresee how a plane might fail, according to NTSB accident findings and its 2006 report on the issue.

http://www.bloomberg.com/infographics/2013-03-28/aircraft-certification-errors-factor-in-deaths.html

Digital System Technology

Maintenance challenges for aircraft mechanics by John Goglia

As aircraft rely more and more on digital systems, maintenance issues for mechanics are evolving along with those changes. Clearly, avionics technicians have had to recalibrate their own skills to keep up with these changes. Yesterday's electronics are not today's microprocessors. And software skills are now as necessary as the right size screwdriver in maintaining these systems.Dreamliner issues

But as issues with Boeing's most recent digital aircraft – the Boeing 787 Dreamliner – point out, it is not just avionics technicians that are facing a new host of maintenance challenges as a result of the increasing use of digital technology to fly today's aircraft.

All mechanics working on these aircraft need to be aware of how these changes can affect the way they do their jobs.

For example, one of the issues regarding the new Boeing Dreamliner that caught my attention was the lithium battery fire on Jan. 8, 2013 at Boston's Logan International Airport. The aircraft was parked at the gate and the passengers had all disembarked when cleaners noticed smoke in the cabin. The smoke was traced to a fire in a battery in the aft electric and electronics compartment.

Electrical systems, batteries, etc.

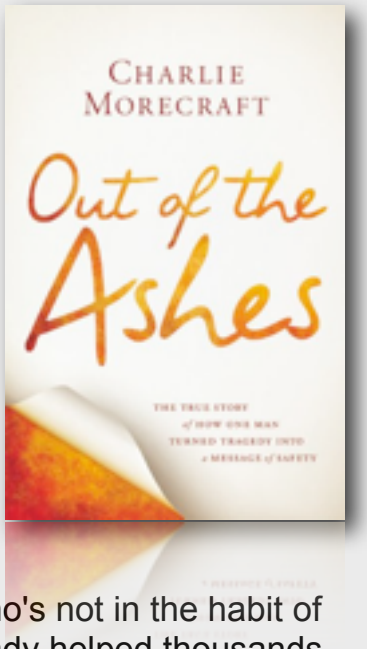
While the NTSB, FAA, and Boeing are still examining the cause of the fire, it is clear to me that mechanics are going to have to focus more of their attention on the electrical delivery systems of these aircraft. Powering the new digital features of these aircraft is compounded by the fact that the aircraft operating systems – such as the air conditioning, landing gear, flight controls, etc. – that were previously powered by hydraulic or pneumatic systems are now solely electrically driven. For example, the cabin pressurization system that was previously powered by bleed air from the engines is now solely powered by electric motor driven compressors.

These changes in new passenger jets have resulted in many benefits, including environmental and economic benefits from a decrease in consumption of fossil fuels, but they are also increasing demand on the aircraft's electric power supply and distribution system. Mechanics working on these aircraft need to focus more attention on these systems as they have become even more critical to safe flight. So, for example, particular attention needs to be paid to electrical connections to make sure they are clean and secure. While this is nothing new, it takes on greater significance in an aircraft relying more heavily on electric power.

In addition, as the lithium battery fire at Logan reminds us, lithium ion batteries have a history of overheating and causing fires. This means that mechanics need to be vigilant in examining these batteries for any signs of overheating.

As we all know, the introduction of new aircraft always reveals new maintenance issues for mechanics. This has been true for my entire career as a mechanic and it continues to be true today. Mechanics working on these aircraft serve an invaluable function as the "eyes and ears" of the manufacturer – identifying potential issues so that they can be analyzed and corrected.

Out of the Ashes: The True Story of How One Man Turned Tragedy into a Message of Safety



Accidents happen, but they're usually the result of human carelessness. Charlie Morecraft found that out one August night years ago, when he literally blew himself up. A long time worker at an Exxon refinery in New Jersey, Morecraft was rushing to leave for vacation and too macho to bother following standard safety procedures when performing a late night repair job. The result? Burns covering 50 percent of his body, months upon months of hospitalization and rehab, dozens of surgeries, and emotional suffering that outdid the indescribable physical pain. Ultimately, Morecraft emerged from that inferno--as damaging to his family as to himself--to become a sought-after safety expert whose clients number more than 5,000 companies worldwide. Now, in OUT OF THE ASHES, Morecraft presents a wake-up call and a plan of action for anyone who's not in the habit of taking safety seriously. Morecraft's inspiring story has already helped thousands to put on their helmets, their safety goggles, and use their common sense before tackling any job or potentially dangerous activity.

http://www.goodreads.com/book/show/13529570-out-of-the-ashes

http://www.charliemorecraft.com/safety-products-display.asp?categoryid=1&specialdiscount=&cid=30643&edition=Newsletter-Mar-2013

Professionalism 101: Why We Must Re-Address Professional Ethics by Dr. Tony Kern, Ed. D

Professional ethics is a deceptively complex issue. It is personal, volatile and potentially a legal powder keg. It makes people nervous.

This is true largely because any discussion of ethics involves questioning another's morality. So let's start this crucial discussion with a simple question: How important is morality to an aviation professional?

At its core, professional ethics is about one thing—trust. Trust between an organization and its workers; trust between employees and their leaders; trust between a service provider and their customers; trust between peers, and trust between the better and lesser angels of your own conscience.Just as professional ethics is the cornerstone of trust, trust is the one essential ingredient in culture. Nearly everyone interested in safety recognizes the importance of culture, and discussions, plans and programs about how to improve cultures are routine. So why is it easier to talk about culture (which is based upon trust, which is created by ethical conduct), but far more difficult to talk about ethics itself?Culture is organizational. It's about groups and is sufficiently vague, and fuzzy enough not to threaten our personal self esteem. Ethics is none of these things. It is personal and necessarily judgmental. Unlike culture, ethics is not about us, it is about me. It looks deep.

Almost by definition, ethics involves a person's faith, parenting, motivations, ambition, values—and self-perception of all the aforementioned. Each of these areas is explosive in its own right, but reaches critical mass when mixed together inside of a real person and then subjected to the challenges of the day-to-day workplace and the light of outside scrutiny. Talking—or even thinking—about one's own professional ethics can be uncomfortable at best, especially if there are some less than perfect things hidden under the rocks. And don't we all have a few of those?

Unfortunately, this leads many to frame the discussion in a timid, third-person manner. They may be willing to talk about professional ethics in general, but not their personal ethics or your personal ethics. That sort of academic cowardice does little for anyone seeking to be a true professional. The issue of ethics is so important, so critical to authentic professionalism, that we must take it to task. We must not shirk from examining our own personal ethics and value systems, beginning with the assumption that they could be improved. I know mine certainly can.

In order to do the right thing, we have to know what right is. In a secular society like ours, everyone is entitled to their own definitions, so long as they stay on the right side of the law. This often makes it difficult to draw a clean line between right and wrong. In nearly any rightness decision, questions arise that muddy the water.

- Right for Whom? Is my best course of action based upon what is right for me, or what is right for others? Many find ways to rationalize that what is right for me will always be right for others. For example, "If I lie and cheat to get the next promotion, is that not justifiable based upon my ability to take better care of my family, or give more to my favorite charity?"
- Right for When? If I take this noncompliant shortcut now, it may allow me to do the right thing later. For example, if a maintenance technician is faced with using an unapproved part or procedure that is good enough for a temporary fix until the aircraft gets back for the next prolonged down time, are they not doing their organization a favor?
- Loyalty vs. Honesty. If I tell the truth about an unethical or noncompliant act by a friend or coworker, they may be punished or perhaps even fired if management finds out.
- "Outsourced Ethics." When ethical decisions are made in a group setting, the ethical considerations are often "outsourced" to the cultural norm. Some cultures that favor getting the job done over ethical or safety considerations will strongly impose their cultural norms on those who might otherwise act more responsibly.

The common element in these and many other ethical dilemmas is that they create mental conditions where the softer road is rationalized as for the so-called "greater good." Compounding this ethical smog is a philosophical school of thought called situational ethics that argues every decision must be analyzed in terms of its own context, which opens up a Pandora's box of "if it feels right, do it" options.

Professional ethics is so foundational to trust that we simply can't afford to go down the slippery slope of situational ethics. In the real world, professionals need standards to guide their decisions and assist them in making the hard calls.

A Reader Comments

I have something that you might be interested in putting in your newsletter. We know fatigue is a huge issue in our business and when I teach HF, I try to cover as much new information as I can. I was talking to one of my associates about HF and fatigue and he shared a very eye opening story.

He said that sleeping well was becoming a rare thing for him so much that he called the doctor and made an appointment. The doctor seemed to think only his shift work was the cause and his medical advice get a day time job. He got a second opinion and this doctor did a number of tests and found the problem. The problem, he was diabetic and his blood sugar would spike several times at night giving the body a signal, wake up burn this energy. This guy is 40 otherwise healthy exercises and eats well. I would never have thought of it from that perspective. I wonder if there are not some of our other folks in aviation that this might be a cause. It is a good thing he sought a second opinion.

Safety at the Core: How Human Factors Influenced Aircraft Maintenance Training

With studies suggesting that maintenance error is a leading contributor to between 15 and 18 percent of all accidents, it is perhaps not surprising then that more and more airlines and training institutions have developed rigorous MRM programs in order to...

At its heart, aircraft maintenance is a complex interface between machine components and the trained professionals who service them. It is only fitting then that reducing the scope of errors that coincides with such a system would be a topical concern for industry players across the world. Indeed, whether it be through engineering advancements or changes in industry oversight, there is no doubting the vast improvements to aviation safety that have taken place over the years. However, behind the complexities of aircraft maintenance lays a single linchpin – the human.Since the early 80s, industry regulators have sought to address the role played by human factors on the flight deck, having established and developed what is now termed Cockpit Resource Management (CRM).

It was not until much later in the 1990s that the same avenue of training was applied to the maintenance sector.

Dainius Sakalauskas, the Deputy Head of FL Technics Training, suggests that, 'Given the requirement for effective communication and teamwork that exists between mechanics and senior engineers, the evolution of human factors training, otherwise known as Maintenance Resource Management (MRM), was likely an inevitability. With studies suggesting that maintenance error is a leading contributor to between 15 and 18 percent of all accidents, it is perhaps not surprising then that more and more airlines and training institutions have developed rigorous MRM programs in order to abate the human element of accident causation.'

To place it in perspective, MRM arose from the unique environment in which maintenance technicians operate. It is the nature of the job that predicting an accurate maintenance workload for a set task can only realistically be achieved following a heavy inspection of all components. Leading from this, it is often the case that maintenance companies resort to employing their staff on overtime, thereby increasing the likelihood and occurrence of prolonged work hours. When this is combined with taxing variables, including the tendency for night shifts, the extensive communication that follows delegation of tasks, overwhelming time pressures or, for instance, working on a ramp in subzero temperatures – it illustrates the degree by which human limitations have an impact on air safety.

'The complex sociotechnical system that defines aircraft maintenance requires above average coordination, communication and cooperation between the various specialists involved in the sector. Prior to any formal MRM training, there were a host of catastrophic airliner accidents for which human error in maintenance was a significant contributing factor. This includes the crash of an American Airlines DC-10 in 1979 leaving 273 dead, the well-known explosive decompression of an Aloha Airlines flight and, more recently, the midair disintegration of a China Airlines B747 in 2002. Rather depressingly, this list isn't exhaustive, but it does serve to highlight how ingrained MRM has become in the industry,' comments the Deputy Head of FL Technics Training, D. Sakalauskas.

In Europe, human factors training in the maintenance sector was mandated with a proposed change to JAR-145 [EASA-145 predecessor] in 2002. The move aimed to ensure human factor principles were adhered to when writing and establishing procedures relevant to aircraft maintenance personnel. Since errors in maintenance are mostly latent, effective MRM is broad in focus allowing emphasis on reducing the human element, increasing safety awareness and improving efficiency. Precisely, its goals were to improve communication skills, cease authoritative attitudes in the workplace, enhance team working skills, instill a degree of assertiveness amongst mechanics and provide a universal understanding of the influence held by human factors.

The key to mitigating the overall risk faced by an airline is by orientating the entire maintenance base towards a safe and error free performance. Indeed, it is only through proper training programs can this be assured.'

A letter from a Technical Trainer of a A/C Maintenance & Training School Part 147 in the Netherlands

Since a short time we have a complete Fokker-100 –F16 in our schools hangar.

This gives us and our students the possibility to work on complete aircraft systems so they can rig, adjust and test mechanical and avionics systems and instruments. To trigger our students extra on there responsibility and the combination work & private life we introduce an extra form in combination with some practical jobcards in school. This is the "I'm Safe checklist".
The item is not new for the industry, but the combination is maybe an eye opener.


I'm safe checklist

Tasknumber:

	Yes	No
Injury		
Medication		
Stress		
Alert		
Fatigue		
Experience		

Student

License Number

Trainer/Teamleader

MC262

The combination is mod-9 Human factors and mod-10 legislation versus work and private life.

The combination we are making is with training jobcards that have a direct relation with flight controls and instrument tests.

The goal is to get a higher degree of awareness with the items on the form and the influence they can have on the job they perform.

The student has to fill in the form and check this with the trainer before starting the job.

The ‘I’m Safe Checklist” is included onto the jobcard.

I hope this is something for a item in the HF magazine. And please write that is free to use .

More employers setting up nap rooms for weary workers

Some employees find a 20-minute nap during the day will boost their productivity.

To help its 20 employees in the office fight through a wave of afternoon fatigue, Nationwide Planning Associates Inc. remodeled an unused closet with a recliner, a fountain and a bamboo rug. Nap time these days isn't just for preschoolers.

Employees of the Paramus, N.J., investment firm sign up for 20-minute blocks of restorative time twice a week and emerge energized, as if hitting the restart button."I don't even drink coffee anymore because (after a nap) you don't need to," said James Colleary, 27, a compliance principal who helped convince management that a nap room would be worth the investment. "If you take only 20 minutes, you actually feel alert (when you wake up). You feel refreshed."

Workers can be forgiven if they look at the company with envy. Armed with technology and operating in a global economy, they are a tired lot.

Without the benefit of a brief afternoon nap, they have turned to habits both healthy and unhealthy to fight their fatigue, only to be faced with the same early-morning wake-up call the next day.

Health experts have gone so far as to say worker fatigue is an epidemic that is weighing on workers' health and productivity. And employers who have ignored it — most of them — have done so at their own risk.

"The measures we have (of productivity) don't necessarily measure quality," said Joel Naroff, an economist based in Holland, Pa. "What workers learn is to get the job done. While they may be trying to get it done as best as possible, the operative phrase is 'best as possible,' not 'best.' "

Sleeping on the commute

Many workers throughout the nation may feel particularly groggy Monday morning. They lost an hour by setting their clocks ahead over the weekend for the annual ritual of daylight saving time.

New Jersey Shore-area workers arrived at the Middletown, N.J., train station one recent Monday for a trip to northern New Jersey or New York that would take upward of an hour, trudging along the sidewalk, coffee and smartphones in hand, while they waited for the train.

While some commuters scoffed at the idea that they were sleep-deprived, others flashed a knowing smile at the question. Jessica Chepauskas, 23, of Middletown, was one of them. She used to drive part of the way to her job, but recently changed her routine and now takes NJ Transit "so I get an extra hour of sleep," she said.

Technology may be getting faster and the world may be getting smaller, but the number of hours in the day hasn't changed.

American workers emerging from the recession have been under pressure to work harder, with fewer hands on deck. They've been handed technology to help them remain in constant touch. And they've been taking care of children and aging parents.

Some 43% of Americans ages 13 to 64 said they rarely or never get a good night's sleep on weeknights, according to a 2011 poll by the National Sleep Foundation, a research group based in Arlington, Va.

Part of the problem?

Humans are designed to set their sleep patterns around daylight and nightfall. Yet almost everyone — 95% — said they use electronics, including television, computers, video games, cellphones or a combination of them within an hour of bedtime, subjecting themselves to an artificial light that isn't conducive to restful sleep, researchers from the foundation said.

It creates all sorts of hazards. Fatigued workers have trouble concentrating and are more likely to suffer from chronic diseases such as hypertension, diabetes and depression, according to the U.S. Centers for Disease Control and Prevention.

And they can put others' lives at risk. Continental Flight 3407 from Newark, N.J., to Buffalo, N.Y., crashed on its approach in February 2009, killing 49 passengers and crew members and one person on the ground. Investigators from the National Transportation Safety Board said the pilots' performance was probably impaired by fatigue.

"Reducing accidents and incidents caused by human fatigue has been on the NTSB's Most Wanted List since 1990," the agency wrote in its accident report.

Despite alerts such as that from the NTSB, employers have been slow to pay attention to sleep, said Carol Ash, director of sleep medicine at Meridian Health System in New Jersey, who consults with Fortune 500 companies.

It seems odd. Employers, trying to rein in soaring health care costs, have increasingly taken on more oversight of their workers' wellness. They have prodded their workers to exercise. They have encouraged them to keep their blood pressure, cholesterol and weight in check. But they don't think twice about asking them to be on call 24/7, Ash said.

Meanwhile, until the fourth quarter of last year, employers recovering from the recession had tried to stay afloat with gains in productivity, squeezing more work from their existing staff, according to U.S. Labor Department statistics.

But the figures don't measure the quality of work.

"For the vast majority of people, it's a formula for failure," Ash said. "The more you have a sleep deficit, the lower the productivity. It's an inverse relationship."

Not that every employer needs to carve out space for naps. Ash said workers needing time to nap could be cured if they got a restful night of sleep. (A 2010 survey by the Society of Human Resource Management, a trade group, found just 5% of employers had a nap room on site.)

But Colleary saw the possibilities.

He had an internship with a bank in New York that touted a nap room, only it wasn't well-thought-out. There was room for three people. There were no assigned times. He would open the door, turn on the light, and inadvertently wake anyone who was trying to nap.

At Nationwide Planning Associates, he gathered data showing the benefits of napping, scheduled a meeting with management and convinced them to spend as much as $10,000 on the project.

Colleary said they make sure there are enough employees to handle calls from clients. And if they are short-staffed on a given day, they will forgo their nap. But the bulk of his co-workers have taken the company up on the perk.

"It was a long time in the making," Colleary said. "It was the middle of the day, and we would say, 'I'm really tired.' 'Me, too, I wish we could take a nap, ha ha ha.' Then over time it became more serious, and we thought, what if we really could do this?"

World Record Holder Launches Paper Airplane Book

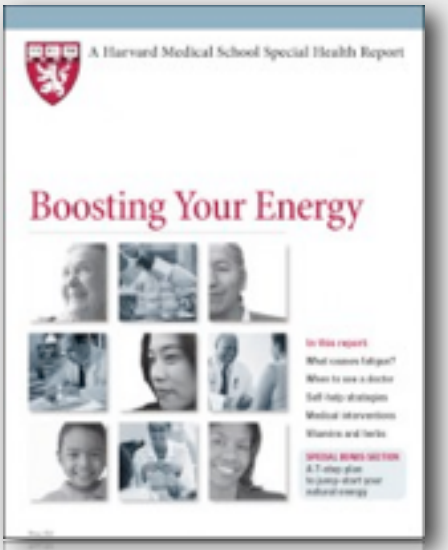
The creator of the world's most efficient paper airplane, John Collins, has launched *The New World Champion Paper Airplane Book*, a guide that explains how to make his record-breaking design, which he named "Susanne" after his wife, and 23 other "masterpieces of precision and aerodynamics."
While "Susanne" was designed for distance by maximizing lift and glide, some of the other paper airplane designs in the book are made to stay aloft for prolonged periods, in some cases for several minutes.

The degree of difficulty in recreating Collins' paper airplanes may vary, but he makes it as easy as possible for the reader to construct them by including step-by-step photographic explanations. And for those who are digitally challenged, there are 16 tear-out airplanes made of durable paper that the reader can start throwing around as soon as he or she can pull them out.

"Susanne" set a new Guinness World Record on February 26, 2012, when former California Golden Bears quarterback Joe Ayoob threw the paper airplane a distance of 226 feet and 10 inches inside a hangar at McClellan Air Force Base near Sacramento, California. The space restriction of the hangar shortened the run-up-to-throw distance, but regardless of the limitation, Ayoob's throw broke the standing record by nearly 20 feet. This is the first time a paper airplane record has been broken by a thrower/designer team. "Susanne" is also the first paper airplane design to use changing airspeed to enhance performance.

http://www.youtube.com/watch?feature=player_embedded&v=wedcZp07raE

4 ways to boost your energy with breakfast



As you sleep, your body is hard at work digesting yesterday's dinner. By the time you wake up, your body and brain are demanding fresh fuel. "Breaking the fast" is a key way to power up in the morning. Do it right and the benefits can last all day.

If you miss the day's first meal, notes Dr. David S. Ludwig, a nutrition expert at Harvard-affiliated Children's Hospital Boston, you may start off with an energy deficit and have to tap into your energy reserves.What's a good breakfast? One that delivers some healthful protein, some slowly digested carbohydrates, and some fruit or vegetables. A vegetable omelet with a slice of whole-grain toast qualifies, as does a bowl of high-fiber cereal topped with fresh fruit and reduced-fat or soy milk, along with a handful of almonds or walnuts.

Try these 4 tips for creating your own energy-boosting breakfast:

1. **Choose whole grains.** High-fiber, whole-grain cereals and breads can help keep your blood sugar on an even keel and avoid a midmorning energy crash. With the hundreds of types of cereal on the market, bran cereal, bran flakes, and steel-cut oatmeal are typically the healthiest bets. To choose the healthiest breakfast cereal, read the label and look for:

   - 5 grams or more of fiber per serving
   - less than 300 milligrams of sodium per serving
   - less than 5 grams of sugar per serving
   - whole grain as the first item on the ingredient list

2. **Include protein.** Yogurt is a good choice; Greek yogurt has more protein than regular yogurt. Eggs (up to one a day) are okay for healthy people. Although yolks are high in cholesterol, eggs have proteins, vitamins, and other nutrients and don't appear to increase the risk for developing heart disease.

   You might also include foods that have healthful fats such as those in nuts or salmon. Limit processed meats to the occasional treat as these foods are associated with a higher risk of colorectal cancer, heart disease, and type 2 diabetes.
3. **Eat in, not out.** You can enjoy a healthful breakfast out if you stick to oatmeal. But much of the traditional fare will start your day with loads of refined carbohydrates and saturated fat. Like most processed food, the breakfast offerings from fast-food chains tend to be high-sodium, low-fiber disasters.
4. **Blend up a breakfast smoothie.** Combine fruit, juice, yogurt, wheat germ, tofu, and other ingredients. Toss them in your blender with a bit of ice and you have a refreshing, high energy breakfast.

For more on developing strategies for boosting your energy, buy Boosting Your Energy, a Special Health Report from Harvard Medical School.