

A new dawn with the Wake-Up Light

Can we get personal for a moment? What are you like first thing in the morning? Do you leap out of bed? Or do you need half an hour and a strong coffee before you're even ready to speak? If you fall into the second group, take heart – a new era has dawned for wake-up technology.

The dawn of man

Our distant ancestors didn't evolve with alarm clocks and a mad dash to the office in the morning. Their world was governed by the rhythms of the sun. This could explain why some of us revert to a kind of Neanderthal state when we are rudely awakened by the sense-shattering cacophony of an alarm clock. Medical experts will tell you sunlight helps regulate our internal body clocks, which explains why it's hard for some to get out of bed on a cold, dark wintry morning. Fortunately, the thoughtful folks at Health & Wellness have come up with a solution: the Wake-up Light.



A bright idea

The idea is perfectly simple and highly sensible – the Wake-up Light simulates sunrise. About half an hour before you want to get up, it starts increasing the light intensity, as if the sun was appearing over the horizon. The Wake-up Light slowly intensifies the light, stimulating your body to adjust its hormone levels. It also decreases the hormones that make you sleep while increasing energy-producing ones. You can also choose some sounds to go with it – birdsong, a pond or the seashore – so you wake up gently and full of energy to face the day.

Seeing the light

The Wake-up Light was launched in France earlier this year. It's not that people in France are particularly bad at getting started in the morning. Rather, consumer research showed they are already well-aware of 'lumino-therapy' or the positive effects of light on the body. Next year, the Wake-up Light will shine its light more widely. The French pilot launch is being extended with a 'money-back' promotion. Other countries will also be able to wake up to a new dawn, as the Wake-up Light goes on sale around the world.

Taking on the world

And the product is receiving rave reviews. Senior PR and Media Manager for DAP France Cinzia de Rossi says: "For me, this is an easy product to talk about because I've got one at home. And it really does work. I wake up ready to take on the world."

The Horse Table

Giving a person or a small animal a CT scan is relatively easy. You lay them on a table and slide them into the scanning chamber. But what do you do if you need to scan a horse? An animal that's almost two meters tall, three meters long and weighs around 600 kilos? You can't just pick it up and put it on the table. And even if you could, it would be too big to fit into the chamber.



Designed around the customer

Philips and an enterprising Dutch veterinarian, Erik Bergman, came up with a solution; the horse table. Erik had the initial idea for the table and he went to Philips for help. Erik's animal clinic, de Lingehoeve, purchased a refurbished Mx8000 Quad CT scanner from Philips. Together they also developed the table to lay the horse on so that any part of its body can be scanned: head, legs, hindquarters or torso.

Horse sense and simplicity

The scanner/horse table at De Lingehoeve is the first of its kind in the world and it has been used successfully since its installation in September 2006. Because the care for animals – especially horses – is on the rise and more money is being spent on their health, the demand for more refined equipment is also increasing. That's why De Lingehoeve's scanner-table doesn't just represent a success for Philips' engineers: it may also be the beginning of a lucrative new market. It makes good horse sense.



Diagnosing Dementia

Dementia currently affects more than 25 million sufferers worldwide. However, as the elderly population continues to grow, so will the number of dementia patients. A new method is needed to diagnose the condition early enough so that doctors can prescribe drugs to delay its progression and thereby delay the worst effects. We may have found the solution.

A promising partnership

Working in partnership with the University Medical Center Hamburg-Eppendorf (UKE), we've developed a computer-aided diagnostics (CAD) system that could help the early diagnosis of neurodegenerative diseases. It may help detect and differentiate the three most common types of neurodegenerative disease: Alzheimer's, Lewy-Body Dementia and Frontotemporal Dementia.



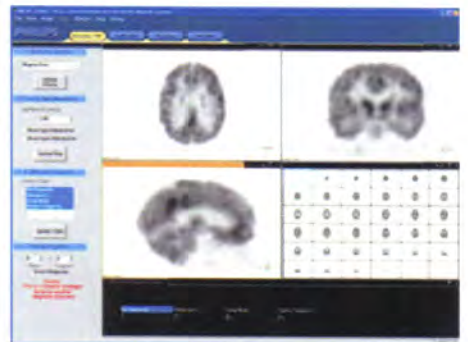
The necessity of early diagnosis

These three diseases are incurable at the moment. Some treatments provide relief in the mild to moderate stages of the disease but they don't stop its progression. Alternative therapies, currently under development, attempt to interrupt the disease process at an earlier stage. However, to be effective, early diagnosis is necessary.

system

This is where the new system comes in. It overlays images of a brain taken from an MRI scan with a PET scan that displays the same brain's activity. It then uses advanced image processing – combined with a set of reference brain scans representing typical disease patterns – to analyze those images and provide a probable diagnosis.

Our new CAD



The benefits

The system offers several benefits. For a start, many dementia sufferers could be prescribed the drugs that slow the progression of the disease far earlier. That would delay the worst effects and increase quality of life. Secondly, it could provide pharmaceutical companies and clinicians with a valuable tool to help develop and test new drugs. It could also be used to help doctors devise patient-specific drug therapies that would maximize their impact while minimizing their side effects.



User friendly

The system is user friendly and it's hoped that less experienced clinicians will be able to use it to offer the same diagnostic accuracy as highly trained specialists. This is something that will become more important because in the not too distant future, there will be a much greater demand for the accurate early diagnosis of neurodegenerative disease. Not everyone will have access to the clinical expertise of a university hospital so an automated system that could help less experienced physicians achieve the same high level of accuracy in their diagnoses is a great boon.

Lighting the Way

Migrating from the cold of Europe to the warmth of Africa across the North Sea can be a hazardous journey. One out of ten birds dies on the way every year because the night-time lighting on off-shore platforms disrupts the birds' internal compass and makes it difficult for them to navigate.

To stop or not to stop

Some birds also mistake the brightly-lit platforms for a safe place to land. The stopover can be fatal because birds deplete their limited food reserves and sometimes don't have enough energy to complete their journey.

More than enough reasons for Philips to look into finding a way to help the birds migrate safely.



A simple solution

We came up with a deceptively simple solution. If birds are attracted by a certain type of lighting, then they may be repelled by a different sort. Years of research resulted in a type of light which utilizes less of the color spectrum. The birds find the greenish light far less attractive and therefore decide not to linger unnecessarily. The lighting solution can be utilized on off-shore platforms, as well as on piers.

Quick response saves lives

Each year in the USA, more than 340,000 people die from Sudden Cardiac Arrest (SCA). That's almost 1,000 deaths a day. With this in mind, one US city has taken steps to boost heart attack victims' chances of survival. Rochester, in Minnesota, has made the Philips HeartStart defibrillator standard equipment for its police and fire services.



First aid

The Rochester police and fire crews don't want to replace paramedics. In fact, they don't usually go to medical emergencies unless there's something they can actually do to help. They will, however, respond if a person has trouble breathing or if someone is bleeding heavily or in the case of Sudden Cardiac Arrest. That's where the HeartStart comes in.

A life-saving shock to the system

The HeartStart defibrillator is designed to treat the most common cause of SCA, which is a malfunction of the heart that makes it beat erratically instead of pumping in a normal rhythm. The HeartStart provides clear, easy-to-follow voice instructions. A highly accurate algorithm makes sure that it only delivers a shock if the patient needs it. Research shows that one shock is usually enough to deal with cardiac arrest.



Always ready

HeartStarts are small, lightweight, easy to carry and tough. They also perform thorough daily, weekly and monthly self-tests to guarantee that they're always at a proper state of readiness.



And there's no risk of a user not knowing whether they're ready to go: a highly visible status indicator shows at a glance that the device has passed its last self-test and is ready for use.

A final word

So was Rochester's decision to make the HeartStart standard equipment the right one? A local police officer remarked that the interaction with the public is not always a positive experience and he expressed how gratifying it is to be involved in saving someone's life. More than 100 lives were saved by Rochester police in 2007. That's a lot of good reasons to choose the HeartStart.