Innovation Business Update

A snapshot of innovation in Philips

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Company confidential

Innovation with payback

By Jim Andrew
Chief Strategy & Innovation Officer

The key to translating ideas into value is through creating much stronger links between innovation, strategy, and execution.

Innovation is not an idea, technology, discrete event or a product, but a process that uses new knowledge – whether created internally or externally – to generate a payback for all our time, effort, and risk-taking. Innovation is not inherently good – it's good that it supports our business strategy. In Philips, our innovation efforts must be closely aligned with our business strategy and its successful execution.

The future of our company will be heavily influenced by the relevance and successes of our innovations. I'm really excited about tackling this challenge head-on and showing exactly what we are capable of, and about working with all of you to make that happen.

jim.andrew@philips.com
+31 20 5977315

Luminous textiles bring spaces to life

'free to fly' communication required

Keywords: ambience, lighting, innovation, LED

A new solution brightens up spaces, whilst also providing a totally immersive lighting experience. Luminous textile panels can change color, display static or dynamic visuals and dampen sound, creating atmospheres which can be tailored to any environment and changed in an instant.

The effect of such instantly-transformable, mood-enhancing interiors became especially clear at the Luminous Textiles event. This was hosted by Philips and Kvadrat Soft Cells at London's prestigious One Marylebone on November 2, 2011. Leading architects, light architects and 'light sculptor' Olafur Eliasson impressed the audience with dreamlike atmospheres and exciting animations.The concept is based on Kvadrat Soft Cells acoustic damping panels, coated with multicolored LEDs, which can be created in different sizes. The modular system offers architects, interior designers, lighting specialists, marketeers and brand developers new creative options in retail, travel, hospitality, workplaces, healthcare and public spaces. The panels meet stringent safety regulations and their hidden integrated power units and ethernet ports allow for the creation of continuous, enveloping panoramas. Even in today's crowded visual landscape, luminous textiles clearly stand out.

More information
Luminous textiles bring spaces to life
Or contact:
- carolin.lukac@philips.com

PHILIPS
sense and simplicity

Improving radiation therapy with MRI

Keywords: mri-guided radiation therapy, mri-linac integration, precise tumor targeting

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Radiation therapy is a key weapon in treating cancer. By integrating MRI and radiation therapy equipment, Philips Research aims to help clinicians target tumors more accurately. This could reduce radiation-induced side effects and the number of treatment cycles.

More information
Improving radiation therapy with MRI
Or contact:
- johan.overweg@philips.com
- +49 40 50782559i

Radiation therapy involves directing an X-ray beam from a linear accelerator (linac) towards a lesion to kill cancerous cells. The entire tumor and as little healthy tissue as possible must be irradiated to kill the tumor with minimal side effects.

However, tumors can move during treatment (e.g. through the patient's breathing) and due to the therapy, so current clinical practice is to irradiate a margin 5-10 mm in all directions around the tumor. To improve tumor targeting, Philips and oncology radiation experts Elekta are working to integrate MRI and radiation therapy equipment.

MRI provides real-time images of soft tissue, enabling doctors to monitor the tumor and nearby organs during treatment. However, standard MRI scanners and linacs can't operate effectively close together. Using its extensive understanding of MRI and magnetism, Research has redesigned numerous MRI components, allowing the scanner and linac to work together without affecting performance. The new components feature in a prototype integrated system at the University Medical Center Utrecht, the Netherlands. The prototype has demonstrated imaging performance comparable with a standard MRI scanner – even during radiation delivery.

Making TV gentler on the eyes

Keywords: eye-care lighting, TV China, contrast, eye strain

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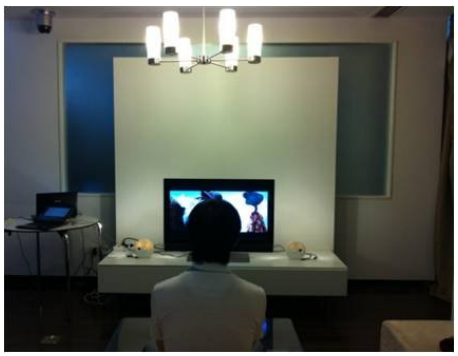

Watching TV can be relaxing – except for our eyes. So Philips Research, Lighting and Design have joined up to develop a lighting solution that reduces eye strain. It's designed for Asia, where eye care is a major concern.

More information
Making TV gentler on the eyes
Or contact:
- gavin.song@philips.com
- +86 21 24115388

Eye care is a big issue in Asia, particularly in China, where myopia (short-sightedness) rates are very high. Up to 85% of young people in senior middle school have the condition, and most parents worry about their and their children's eyesight. This led the Philips team to explore consumer interest in 'TV eye care' and to develop a solution. Scientific tests conducted with the highly-respected EENT hospital, part of Fudan University and Hospital, indicated how the right lighting conditions can reduce eye strain.

Both the general room lighting and the contrast between the TV screen and the wall behind, play a key role. So Philips team developed a prototype lighting solution based on two luminaires, which are placed on each side of the TV. These automatically adapt to the overall room lighting, so the light coming from behind the TV reaches the eyes at the ideal angle and light level. The prototype has proved popular in consumer tests, and a final product should be on the market by the end of 2012.

CL Reconnaissance Program

Keywords: lifestyle innovations, consumer lifestyle research projects, CL reconnaissance program

'new born' communication restricted

When Philips Consumer Lifestyle (CL) placed an urgent call of action for new innovations from Philips Research, the CL Reconnaissance Program was born. This unique approach speeds up innovation creation. In just 6 months, new ideas are proposed, evaluated and selected as quick winners or stopped as fast fail results.

More informataion
CL Reconnaisssance Program
Or contact:
- emile.aarts@philips.com
- +31 40 2748167

The CL Reconnaissance Program gives researchers just 6 months to make or break their ideas. For the first batch in 2011, 8 projects were evaluated. Each month the project team reported to a coaching team with business representatives who provided intensive coaching to determine the feasibility of the idea. The goal was to quickly determine Quick Wins and Fast Fails. Emile Aarts, Senior Scientific Officer at Philips Research, says, "Fast failures are a reason for celebration. If you can determine in half the time that a promising concept is not feasible, you can explore two options for the same amount of money." In 2011, 16 Reconnaissance projects were evaluated. Of these, 6 were Quick Wins, 4 were Fast Fails and 6 were put on hold. One Quick Win was the 'Body Composition' project. The new technology measures fat rather than weight in specific areas of the body. One Fast Fail was the '(De)Hydration Monitoring' project, which was stopped because there is no commonly accepted standard for measuring (de)hydration in the medical domain. The Program will continue in 2012.

A blanket that wraps babies in healing light

Keywords: neonatal jaundice, phototherapy, Bilirubin blanket

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Neonatal jaundice affects over half of all newborn babies. It can be treated with phototherapy, and Philips has developed the first in a new generation of phototherapy devices for newborns. Called the Bilirubin Blanket, it wraps around these youngest of patients to comfort as it cures.

More information
A blanket that wrap babies in healing light
Or contact:
- liesbeth.van.pieterson@philips.com
- +31 6 31689987

Neonatal jaundice is caused by a build-up of bilirubin in the blood. Luckily, this substance breaks down when exposed to blue light, so jaundiced babies are placed under blue lamps until they recover. The effectiveness of this therapy is directly proportional to the amount of skin exposed to the curative light – but conventional phototherapy lamps only expose the babies to light from one direction. Also, the babies cannot be cradled during treatment. To overcome these limitations, Philips has combined its expertise in lighting and healthcare to develop the Bilirubin Blanket – a regular, soft blanket integrated with a new light-emitting textile technology. It literally wraps the baby in curative blue light, ensuring the light shines on the maximum amount of skin, significantly improving the treatment's efficiency. And for the first time, baby can be comfortingly wrapped up during treatment, while being cradled by Mom or Dad.

OLED – a new way of experiencing light

Keywords: OLED, livable cities, quality of light

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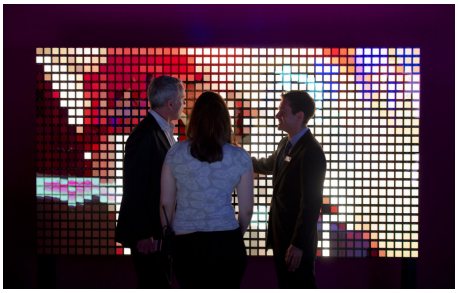

More information
OLED - a new way of experiencing light
Or contact:

- dietmar.thomas@philips.com
- +49 241 5392356

Reflecting its commitment to 'simply enhance life with light', Philips is using LED lighting to help create livable cities. Its innovations in the area of Organic LEDs – or OLEDs –marketed under the name Lumiblade, offer a different yet complementary quality of light to enhance indoor environments.

Lighting is an integral part of urban life, and OLEDs are opening exciting new doors to how we use light in our homes, offices, shops and hotels – for decoration, design and ambience creation.

An OLED is an extremely flat, lightweight panel. Switched off, it resembles a mirror. But when current is applied, the whole panel lights up. OLEDs' unique characteristics are set to redefine the way we use and experience lighting.

First, there is the almost magical nature of the lighting itself. OLEDs create an even surface of beautiful, non-glaring light – as opposed to the points of light delivered by LED technology. Then, there is their extensive color palette, heat emission, energy efficiency and high degree of controllability. Add to that their physical form, which makes it possible to integrate light into clothing, furniture, vehicles, works of art ... The possibilities are endless.

Solutions like Philips' OLED ceiling tile and Lumiblade Living Shapes, the world's largest OLED lighting installation commercially available today , are complementary to – not a replacement for – LED. Each provides different meaningful applications for digital lighting in an increasingly design and energy-conscious world.

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