



Places of life

Philips Ambient Experience for PET/CT improves atmosphere in a protective environment

Who/where

Freiburg University Hospital is one of the largest hospitals in Europe. The Department of Nuclear Medicine is headed by Professor Wolfgang Weber and offers both radiotherapy and nuclear diagnostics. There is a strong research focus on positron emission tomography (PET) and PET/CT imaging.

- Professor Dr. Wolfgang Weber
- Dr. Philipp Meyer, senior physician
- Dr. Michael Mix, leading physician
- Dr. Damian Wild, senior physician
- Claudia Scheurer, technical assistant

Challenge

Improve the overall atmosphere of the Department of Nuclear Medicine in order to reassure patients.

Solution

- Ambient Experience for PET/CT
- PET/CT scanner

As in most hospitals, the PET/CT scanner of the Department of Nuclear Medicine at Freiburg University Hospital is tucked away in a windowless room in the basement - which doesn't do much to calm the nerves of anxious patients. In June 2009, however, the situation changed. The department's decision to combine a new PET/CT with Philips' Ambient Experience has been welcomed by both patients and staff.



The TV in the waiting room shows the patients the themes that are available in the PET/CT exam room.

In an ideal world, hospital architecture would be bright, open and lavish to help put patients at ease. The reality, though, is frequently very different. In Nuclear Medicine, for example, radiation protection requirements have to be observed. As a consequence, nuclear medicine tends to be practiced in hospital basements where natural light is a luxury and windowless walls almost inevitably create a bunker-like atmosphere.

Improving the atmosphere in a protective environment

Professor Dr. Wolfgang Weber, head of the Department of Nuclear Medicine at Freiburg University Hospital, has often pondered the problem. "A PET/CT examination is not necessarily a pleasant procedure and the location of the room can add to patient discomfort. We therefore wanted to take action and improve the overall atmosphere of our department in order to reassure patients."

PHILIPS

At RSNA 2008 in Chicago, Weber had an opportunity to take a closer look at a potential solution, which promised an element of wellbeing for his department. At the event, Philips presented its Ambient Experience system for PET/CT for the first time. Given his own department's circumstances and with the hospital in the process of acquiring a new PET/CT scanner, he was intrigued by the possibility of supplementing his new scanner with Philips' Ambient Experience. Half a year later, in June 2009, the installation was complete.

The Ambient Experience begins in the patient waiting room. A Philips flat screen TV with Ambilight shows comforting videos to help patients relax. Patients can even choose a video theme to be played during their scanning procedure later on, giving them a sense of control over the entire procedure.

"We should not forget that most of our patients are severely ill, but still in good physical shape. They are very anxious about the results of their PET/CT scan, so they appreciate a friendly environment that takes their minds off their situation," says Dr. Philipp Meyer, a senior physician in the department.

"We wanted to improve the overall atmosphere"

In the uptake room, too, patients are greeted by warm wall lighting – however, the full potential of Ambient Experience unfolds in the PET/CT room. While the scanning is being carried out, the patient's chosen theme is displayed on the wall and the room is flooded with the corresponding light pattern and sound scheme. The video sequences distract a patient's focus from the medical procedure to pleasant images of cartoon characters or landscapes - the latter are most popular among patients,

according to Claudia Scheurer, one of the department's technical assistants: "America, Asia, Australia – the landscape sequences are the ones patients love the most. And so do I." "The warm, reassuring atmosphere turns our PET/CT room into a place of life," adds Philipp Meyer. "This is what hospitals should be striving for."

"It's nice to see patients smile"

According to Dr. Michael Mix, the department's leading physician, lighting and animations make a real difference: "You can actually feel how the lighting system lifts the atmosphere in the whole room. The light and the projections distract the patients from the examination. It helps them to relax. We are talking about a big and, for many patients, frightening machine. It is nice to see that the projections make some of the patients smile."



The uptake room with Ambient Cove Lighting relaxes the patient prior to the exam.



The soft Ambient Cove Lighting, the colored light patterns, the accompanying audio, and the accompanying audio, transform the exam room into a relaxing environment.



Dr. Philipp Meyer, senior physician

“Anxiety is very common with these big machines. If we can allay the patient’s fears through light and projection, we should do so.”

Claudia Scheurer agrees: “I would certainly be happy to have something like this if I were a patient. It really calms patients down. It helps with the examination, too: we cannot carry out a proper PET/CT if patients are agitated.” In Freiburg, most of the patients that have a PET/CT are elderly oncologic

patients. But not all; Scheurer recalls a little girl who came for an examination recently: “She was thrilled by the animated cartoon projections, and she really became a lot more relaxed as a result.”

“The light and the projections distract the patients from the examination. It helps them to relax.”

Freiburg University Hospital currently has ten different projections to choose from. “For the future, I would love to have even more options to choose from. And I really wish that we could feed our own video material into the system as well to individualize the projections even further,” says Professor Dr. Wolfgang Weber.

Warm colors against an aura of illness

Many staff members are also positive about the atmosphere created by the Philips

Ambient Experience solution. Dr. Damian Wild, a senior physician who joined the department only recently, recalls his first impressions: “The difference struck me immediately. I have always been interested in design, and I think Ambient Experience is very sophisticated. It is well done from a design perspective, and I am convinced that this has a positive effect on the patients. Warm colors influence mood. This applies not just to the patients, but to everyone. In a hospital, in particular, there is always an aura of illness no matter what you do. Lighting and projections cannot prevent that entirely, but they can certainly help.”

Philipp Meyer totally agrees with his colleague: “These huge, oversized machines are frightening, especially in an oncologic context. Spending an hour in one of these machines really pushes people to their limits. Lighting and projections help to allay their fears. This can only be good.”



Patterns from the SkyLight, the thematic projected patterns transform the examination room into a soothing environment.



The dynamic colored light patterns from the overhead SkyLight wrap the patient in a tranquil ambience.

Marketing matters

Besides making patients feel more comfortable, the Ambient Experience solution also sets the Department of Nuclear Medicine at Freiburg University Hospital apart from other institutions in the region which also have PET/CT scanners. Michael Mix has seen a change in patients' attitudes in recent years: "We have noticed that patients' expectations have increased. It is not only the quality of the examination that counts, it is the surroundings as well. This is particularly true for foreign patients. And as an internationally renowned university, we have a lot of foreign patients. So the Ambient Experience solution is certainly interesting from a marketing perspective as well. Like it or not, this is how health systems are evolving at the moment."

"The Ambient Experience solution is certainly interesting from a marketing perspective as well."

Philipp Meyer agrees that Ambient Experience can be useful in terms of marketing. But he also points out that, for a university hospital, this aspect is less important than for other institutions: "We are not that affected by growing competition in the healthcare market. In a private practice, this aspect is far more important. If I were the owner of an ambulatory PET/CT or MRI, I would certainly think of implementing Ambient Experience."



The technical assistants from the Department of Nuclear Medicine.

Tailored to the needs of the customer

The Ambient Experience solution is not an off-the-shelf product. It needs to be customized to the specific architectural situation in a department and to the individual needs of the customer. In this respect, Michael Mix says that Philips did a great job in Freiburg: "Our ceiling is low. Therefore we needed special LED lighting. In addition, we had to find a solution for the projections, because the low room height means we cannot project onto the ceiling." Projections are now beamed onto one of the side walls so that patients can see them when entering the room and while preparing for the scan. "I have to pay Philips' implementation team a big compliment. They managed to cope well with our location and they kept to our tight deadlines," says Michael Mix. "We wanted to make the system available to the patients as quickly as possible and Philips enabled us to do that."

"I have to pay Philips' implementation team a big compliment."

Mix would also recommend installing the Ambient Experience system in parallel to installing a new PET/CT scanner. "It definitely made things easier. When you replace one of these big machines, you usually have to do some major refurbishing anyway. There is often some modification necessary in the air conditioning, for example. For this you have to open the ceiling, and if you do that, you can install most of the lighting and projection hardware right away."

Please visit www.philips.com/ambientexperience



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