**Technologie für das Wohnen.** Ein Alpbacher Arbeitskreis geht auf die besonderen Bedürfnisse älterer Menschen ein – und auf spezifische Lösungen. VON ERICH WITZMANN

# Achtung! Die Aging Boomers kommen

**….. Translation**

# Beware – The Aging Boomers Are Coming

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**Technology in the home: an Alpbach working group is exploring the special needs of the elderly and the aging and developing specific solutions to address them, just as a great wave of aging boomers is about to hit.**

The oldest members of the baby boom generation are now turning 65, and a massive wave of aging boomers is about to hit society with full force. Dr. Sumi Helal, professor at the University of Florida, has seized upon this fact as a point of departure for his work, the development of the Gator Tech Smart House. The post-war baby boom set in a good ten to 15 years earlier in the United States than its parallel development in Europe. Thus Helal and his team commenced work on the development of a high-tech home as far back as ten years ago.

And as Helal explained at the Alpbach Technology Forum, every possible aspect of development has received attention in his Smart House project. His twelve-person team includes not only IT specialists and engineers, but also an ecologist and even a psychologist. The original impetus for the project came from the fact that over ten percent of Americans over 65 show symptoms of Alzheimer's disease, and that on average, 85 hours of care is required – per week. Other age-related conditions and disabilities require a similarly high level of assistance. The living environment of the future should facilitate the aging process by helping to maximize independence and maintain a high quality of life.

One key area is reducing the number of steps required for a task, for example in preparing meals or taking the correct dose of medication. Another is monitoring the residents themselves. It is well established that the elderly do not tolerate being under constant observation, thus the notion of installing cameras was rejected from the very beginning of the project. Instead, sensors and movement detectors make it possible to monitor those requiring assistance. The majority of electronics required for the task are installed under specially-designed, slip-proof flooring. Even if the high-tech equipment of the Gainesville house remains hidden from sight, the Smart House is a self-contained world of its own.

Yet doesn't the danger exist that residents of such "smart homes" will become increasingly passive, and even more dependent on assistance? Dr. Petra Bohuslav, member of the Lower Austrian provincial government and Lower Austrian minister of the economy, invited Dr. Helal to participate in the Alpbach Forum and posed this question to him herself at one of the discussions. The professor admitted that yes, this may be one

possible development, but on the whole, "absolutely essential assistance is in fact being provided for here."
Helal declined to provide information about the costs of such a project, but suggested that old-age insurance policies focused on age-appropriate living environments might be one option. The Smart House is not yet in serial production, but it is ready to go.

## AIT - Research in a European Network

In a subsequent presentation, some in the Alpbach working group were surprised to learn more about an Austrian project boasting similarly high technological standards. The AIT (Austrian Institute of Technology) collaborates within a tight-knit European research network working from similar premises as their colleagues abroad: many elderly are going to prefer to remain in their homes, and mobile assistance will continue to be more affordable than the care provided in nursing homes. New technologies are focused on monitoring the presence/absence of the resident; the front door (making sure access is clear); the bathroom, and the kitchen range. Like Helal's, this system makes it easier for residents to prepare meals and take their medicine correctly. Electronics systems will sound an alarm if the tap isn't turned off, or if the resident fails to get out of bed at the usual time. "The more sensors we install, the more possibilities we have," explains Manfred Bammer, director of the Biomedical Systems department of AIT.
Bammer and his team have also taken care to address the special needs of the elderly. For example, traditional emergency buttons exhibit two flaws: first, the person in need might not even be physically able to press the button. Second, some persons might activate the button in a non-emergency, either because they are distracted or confused, or simply wish to speak to someone. The new sensors, however, are able to report an emergency by mobile phone or e-mail without activation by the person in need.
AIT has been able to test and showcase its development in the form of a house – a prefabricated house at the Blue Lagoon model home park in Vienna/Vösendorf. The project will continue with the installation of a model apartment. And yet another research project is aimed at architecture and interiors: because the elderly spend most of their time indoors, they require more daylight in their living environments. Peter Holzer, director of the Danube University Krems Department for Building and Environment, explains that "only direct sunlight can stimulate the production of the body's own vitamin D3."
Manfred Bammer encourages younger generations to fully utilize new technologies. When planning their new apartments or homes, for example, they should allow for later retrofits to install sensors used to increase energy efficiency or serve as alarms in old age.

**AT A GLANCE**
Aging in fashion: one working group at the Alpbach Technology Forum is dedicated to the topic: "Simple – functional – trendy? High-tech solutions for old and young." The discussion revolves for the most part around aging. Demographic predictions foresee an increase in the number of people over 65 from 17% of the total population in 2009 to 28% by 2050.