Smart Care

The Computerworld Honors Program[1], a technology awards program formerly run through the Smithsonian Institution, selected Elite Care's[2] "smart" eldercare home in Oregon, USA as a Worldwide Finalist in its "A Search for New Heroes" competition. Judges selected Elite Care for the honour based on the company's case study that explains how "smart home" technology improves the quality of life for elderly people living in community-based care settings, such as assisted living and residential care facilities. Elite Care opened its first "smart" home for elderly residents at Oatfield Estates in September 2000 near Portland, Oregon, USA.

Assisted living and residential care facilities are increasingly popular long-term care alternatives for elderly people in the U.S. The facilities use a social model of care philosophy designed to provide residents with more autonomy, choice, and personal control than allowed in conventional institutional care settings, such as a nursing home. Many social model facilities, however, tend not to be able to uphold their intended philosophy because they cannot manage the risk inherent with allowing residents more freedom. To ensure residents' safety and to limit corporate liability, many assisted living and residential care facilities eventually revert to policies similar to the restrictive institutional model.

Elite Care's smart home health care system at Oatfield Estates uses technology to increase the information flow among elderly residents, management, family, and physicians to allow residents more freedom with minimal risk. Elite Care's system, called "Creating an Autonomy-Risk Equilibrium" (CARE), uses a network of biosensors wired unobtrusively into the home to gather information on residents. Some sensors gather information in conjunction with an Infrared/Radio Frequency badge worn by residents, while others gather information independent of the badge. Information gathered falls in three health categories: 'vitals', 'inputs/outputs',

and 'movement'. System sensors also regulate the home's climate controls, lights, and kitchen appliances.

All sensors connect directly to a Programmable Logic Controller (PLC). A software program pulls data from the PLC via a high-speed Ethernet/Internet connection and stores it in real time to a to a SQL server that alerts staff, family, and physicians or other authorized clients when a resident breaches

predetermined parameters or when signalled by the resident. Users can also access data for personal biofeedback through an elder-friendly software program with touch screens run on PCs found in every room. Residents can access the Internet through these PCs as well. Residents know about the technology before move-in, can choose to turn components off and on, and control who has access to the data. The technologies do not interfere with the residential character of the home.

These data and technologies enable the CARE System to provide:
(1) Residents with a panic button tied to their location; prompts, cues, and other reminders to reinforce desired behaviours as memory fails; and access to the Internet to expand communication possibilities;
(2) Health care entities, including physicians, with health trend information to identify changes in a resident's condition early on that may reduce health care costs;
(3) Facility management with feedback nec-

essary to experiment safely with social models of care;

(4) Families with means to participate from remote locations in the care of residents.

The Computerworld Honors Program[1] (http://www.cwheroes.org) brings together the Chairmen or Chief Executive Officers of one hundred leading information technology companies to help universities, libraries, and research institutions document the global information technology revolution. Over the course of each year, members of the Chairman's Committee identify organizations whose use of information technology is noteworthy for the originality of its conception, the breadth of its vision, and the significance of its benefit to society. Intel Corporation CEO Craig Barrett nominated Elite Care for the award.

Elite Care works with an Advisory Committee with representatives from key institutions such as Mayo Clinic, Harvard University, Intel, Oregon Health Sciences Universities (OHSU), Providence Health System, the University of Michigan, the University of Wisconsin (all USA), and Eindhoven Technical University (The Netherlands).

See: http://www.elite-care.com
Bob Ornstein BA, Elite Care Corporation

References
1. http://www.cwheroes.org
2. http://www.elite-care.com

In memoriam Tonny Brouwers (1931-2001)
Tonny Brouwers passed away on June 12, 2001 after a brief illness. Together with Jan Graafmans, he coined the concept "Gerontechnology" in 1989[1] and was co-organiser of the first international Gerontechnology Congress in 1991 in Eindhoven. This was not just accidental: for over 25 years he was constantly alert on multidisciplinary issues for students and staff
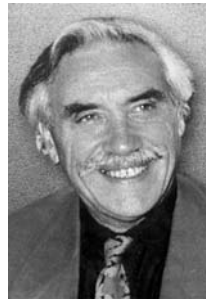
members alike at the three Universities of Technology in the Netherlands and that of Eindhoven (TUE) in particular. Heading the horizontally organised BioMedical and Health Technology unit (BMGT) at TUE, over the years he organised an impressive series of conferences on themes as divergent as traffic safety and ethics. The enthusiasm met when they proposed a conference on Gerontechnology, made them choose for an international one.

His creative mind had difficulty in getting used to retirement. In personal letters and also in poems in Japanese Haiku style, he kept on communicating to a wide circle of friends, drawing attention to aspects of life that he valued.
Tonny Brouwers had been honoured by a Netherlands Royal distinction.
He is survived by his wife Lenny and their five children.

Herman Bouma

References
1. Graafmans JAM, Brouwers A, Gerontechnology, the modeling of normal aging. In: Proceedings of the 33rd annual meeting of the Human Factors Society, 1989, Denver, Colorado, pp 187-190.Santa Monica, Ca: The Human Factors Society.