Canadian Centre for Housing Technology : demonstration opportunities at the InfoCentre
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NRCC-42504

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Canadian Centre for Housing Technology

Demonstration opportunities at the InfoCentre

By Luc Saint-Martin

Looking for a place to showcase your innovative products in a real house that welcomes hundreds of visitors every year from Canada and abroad? The InfoCentre at the Canadian Centre for Housing Technology may be just the answer..

The Canadian Centre for Housing Technology (CCHT) is a research facility that uses twin houses to evaluate new technologies in side-by-side testing. The CCHT also has a three-unit townhouse with offices, display room, conference room and a furnished unit called the FlexHouse that is used to demonstrate homes that can be adapted to life's changes. The display room, conference room and FlexHouse can all be used to install working prototypes of innovative technologies that are intended for residential or light commercial markets.

The CCHT, a partnership between the National Research Council of Canada (NRC), Natural Resources Canada (NRCan) and Canada Mortgage and Housing Corporation (CMHC), affords the Canadian building industry a unique opportunity to test materials, products and systems in a setting that is at once realistic, yet as precisely monitored as a laboratory.

The facility manager, Luc Saint-Martin, explains: "The basic premise is that a house is a system. In a lab, you can assess and optimize a single component, such as a new type of furnace. But the CCHT lets you evaluate a whole integrated system of heating, cooling, ventilation and hot water distribution in a real-world setting."

The $1.6-million CCHT facility was built on NRC grounds by Minto Developments Inc. to R-2000 specifications. The houses are representative of what was available on the market in 1999 in a typical Canadian suburb in Ottawa's south end. But that is all that they have in common with an average house. The twin research houses are equipped with an array of sensors and meters that can measure even the most subtle changes in the indoor environment and provide over 12,000 readings each day. CCHT researchers have developed a system of "simulated occupancy" to ensure that the energy use in the houses is based on a realistic model. That means that appliances, lighting, plumbing and equipment all run as though the houses were occupied by a family of four. Lamps are even used to generate the heat that occupants would generate.

One of the houses is used as "reference" and remains untouched as an experimental control, while the "test house" is modified or configured according to the requirements of the test. For example, a new type of programmable thermostat could be installed in the test house, and its performance and impact measured against the control. All changes to the test house are done in such a way that they can be reversed and the house can be returned to its original configuration, ready for the next test.

Results from tests carried out over the past two years have proven the twin-house concept, and demand for the use of the facility is growing. Since clients pay to use the facility, results remain confidential.

Located just across the walkway from the research houses, the CCHT InfoCentre greets about 1,000 visitors a year, many of whom are delegates from countries such as Russia and China. CCHT works closely with its two partners and with other federal departments such as Industry Canada and Foreign Affairs and International Trade to ensure that delegations interested in residential technology include the facility tour on their itineraries. Products can be showcased in the display room, in the conference room or in the FlexHouse as appropriate. Notes Saint-Martin: "We have sunlight-sensitive blinds from Sun Dial Industries installed in the large bay window of the display room and every visitor gets to see how they work".

The FlexHouse, designed by Nouvelle Development Corp. of London, Ontario, and the recipient of a CMHC award, is an example of a construction that can be modified to suit the changing needs of its occupants, including changes in their mobility. It is a very appropriate setting in which to demonstrate technology that could help people with disabilities live independently or monitor occupants' health remotely. With fiber-optic cabling, technologies such as HDTV, high-speed Internet and other applications can be demonstrated.

As the CCHT InfoCentre gets "smarter" with new technologies put in place, people with an interest in those types of technologies will be drawn to CCHT, increasing the exposure for exhibitors and the overall impact of the facility and the technologies tested or displayed.

Saint-Martin stresses that, collectively, the CCHT structures offer industrial clients a range of attractive options to test and showcase their technologies. For instance, the reference and test houses are currently equipped with fiber-optic wiring and can be used to test systems or document and fine-tune installation procedures for professionals.

For more information on opportunities regarding the use of the CCHT facility, contact Luc Saint-Martin at (613) 991-0960, or luc.saint-martin@nrc.ca.