

NHL has its Eye on the Ice

By Dan Rosen - NHL.com Staff Writer

CHICAGO -- NHL Facilities Operations Manager Dan Craig won't be waking up in the middle of the night in a cold sweat this week wondering if the rink he's building for the Bridgestone NHL Winter Classic at Wrigley Field is still in working order.

Craig has Eye on the Ice on his side.

Founded by Hans Wuthrich, an expert in ice making for the sport of curling, and developed by Rick Forfar, a computer programmer, Eye on the Ice is a wireless environmental monitoring system that provides live updates on the ice conditions.

"It's a good data collector," Craig told NHL.com. "It keeps us informed."

The system was set up Dec. 20 at Wrigley Field. It is made up of eight probes and three transmitters that will measure, collect and distribute data such as humidity, air temperature, ice temperature, air flow, dew point and supply and return temperatures below the ice surface.

The probes, which are 12, 25 or 40 feet long, are set inside the ice surface. They send the data to the remote control-sized transmitters, which are on the floor outside of the boards and covered by plywood boxes as to not get stepped on or blow away.

The transmitters, which run on two double-A batteries, organize the data and send it out to any laptop or cell phone they are linked with every 30 seconds. The information will keep Craig constantly in touch with his ice at Wrigley Field.

"If your ice all of a sudden gets too warm, if it goes beyond the parameters that you want, it will send a text message to cell phone and an e-mail your account," Forfar told NHL.com. "You can have it set up however you want to as many people as you want. So, if it's 2 o'clock in the morning and something goes wrong in your rink, you can be proactive and go down to the rink and fix it. A lot of times if you get down to the rink next day it's too late."

"You and I can be having lunch across the street and not worry about whether we have a hiccup or not because this will send an alarm at any given time," Craig added.

Forfar and Wuthrich contacted Craig about using Eye on the Ice for the Winter Classic. Craig was intrigued, so he traveled to Vancouver to see how it was being used during a speed skating competition.

If all goes well at the Winter Classic, Craig said he may be convinced to try to incorporate Eye on the Ice into all 30 NHL rinks, provided it is cost effective.

"It's something I want to start here and see how we can implement it," Craig said. "It's not something that is going to be brought on right away as I see it. This is a project that I'd like to work on in the next 12-18 months and go from there."

The comfort and accessibility is what interests Craig the most.

"I can't go on to a laptop now and find out what is happening in Washington," he said. "If I had this I could be sitting at your desk and say, 'Which building would you like to look at?' This stuff will always be active, even when the ice sheet is covered."

"One thing happens (to the ice) and it pays for itself the first time," Forfar added.

Forfar said using the system outside is actually simpler than doing it in a temperature-regulated building.

"Our communication is wireless and we'll have no interruptions," he said. "We're used to working inside buildings and you have to go through 40 feet of concrete and steel and you can run into complications there. The fact that it's outdoors, it should almost be line of site and you shouldn't run into those complications."

"We've done outdoor tests, obviously," Wuthrich added. "Last year, where I live, just north of Winnipeg, we had a system outside in minus-45 for about a week and a half and we had no problems. We have used it in the rain. It should be perfect."

Forfar said the set up took three hours of actual work time spread over a 12-hour day. They had to wait until Craig's team built up the ice to three-quarters of an inch before setting up the probes.

"The way it used to be done is you would hire several guys and run hundreds of wire through the building and it would take them days (to set up a monitoring system)," Forfar said. "I show up with my case

and can do that in a couple of hours. You are taking a four-day job and making it a three-hour job and you can clean the whole system up in a half an hour. You just go pick these things up. They're mobile."

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-- Dan Craig on Eye on the Ice technology

Wuthrich, who also owns a landscaping business near Gimli, Manitoba, had the idea for the wireless environmental monitoring system 10 years ago, but said he needed someone to make it work for him. Forfar, who used to work Wuthrich as a landscaper, jumped on board with his computer programming degree.

"We met and within a month we had the company up and running," Forfar said.

Wuthrich said the technology was originally built for curling, but it has grown since its inception. His next goal is to get it into the 2010 Winter Olympics in Vancouver for all ice events, including hockey.

"We already have it in curling for the 2010 Olympics, but we're trying to get it in for the other ice makers as well," Wuthrich said. "All the ice makers that do the different venues have been meeting for the last three years. That's how I know Dan. We have been having meetings with the organization committee for the Olympics to figure out how can we make the Canadian Olympics the best ever and what do we need to achieve that."

Contact Dan Rosen at drosen@nhl.com