

Industrial Research Assistance Program (IRAP)

Region:
Quebec
Chicoutimi

Cycles Devinci



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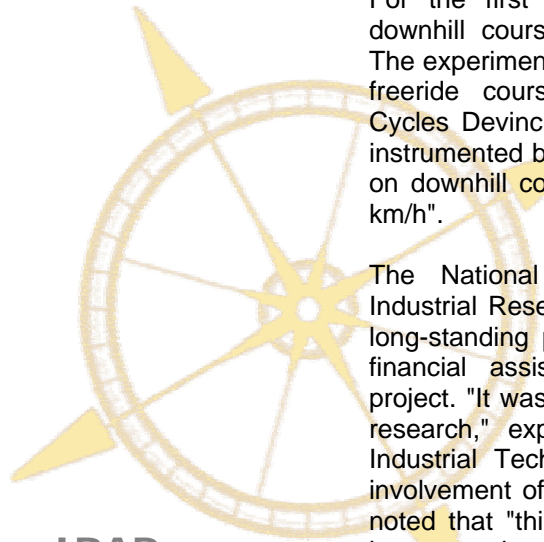
Félix Gauthier, President, Cycles Devinci

The ultimate ride

Some people dream of Everest, others of the woods behind their house. Whether one is involved in extreme sports or not, hurtling down steep slopes on a mountain bike requires flexibility and resistance, from both the cyclist and the bike. Man and machine become one to overcome obstacles and defy gravity. Yet, behind every feat there is often an engineer looking to push the technical limits of the two-wheeled steed. If only we could make a bike talk during the ultimate ride, we could gather from it precious information to improve the product. At Cycles Devinci, a bike manufacturer in the Saguenay area, the research and development department latched on to this idea, and a few months ago, the company launched a bike equipped with a variety of data sensors. The expression "getting off the beaten track" took on a brand new meaning.

The high-tech bike loaded with digital sensors, called the instrumented bike, is the result of a partnership between Cycles Devinci and a university research lab, the Groupe d'acoustique de l'Université de Sherbrooke (GAUS). Most notably, engineers and researchers were able to measure under real conditions the forces that are exerted on the handlebars, the seat and the all-important rear shocks of the bike, and were able to see the distortions in the bike frame. The sensors on the instrumented bike are linked to a data-capture system that is carried by the rider. Cycles

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Devinci believes that it has revolutionized bike design. For example, the instrumented bike was tested on the World Cup mountain biking courses at Mont Sainte-Anne, in the Quebec City region. For the first time, the forces generated on a downhill course were determined with precision. The experiment was repeated on cross country and freeride courses. Félix Gauthier, President of Cycles Devinci, was very happy to note that "the instrumented bike has proven to be easy to handle on downhill courses, even at speeds reaching 85 km/h".

The National Research Council of Canada's Industrial Research Assistance Program (IRAP), a long-standing partner of Cycles Devinci, provided financial assistance for the instrumented bike project. "It was the next logical step in their design research," explained Sylvain Saint-Gelais, IRAP Industrial Technology Advisor, who felt that the involvement of GAUS was another advantage. He noted that "this scientific cooperation has had an impact on the company by increasing its innovative abilities". For Cycles Devinci, founded in 1987, IRAP is a first-rate strategic partner. "IRAP has allowed us to enhance our network of contacts significantly," said Devinci's Félix Gauthier, who regularly meets with his IRAP advisor.

Cycles Devinci employs approximately forty people, whose average age is under thirty. Its manufacturing of high-end aluminum bike frames makes it an important regional resource. Cycles Devinci recently won the Technology award of the Association de la recherche industrielle du Québec, in the partnership category. ■

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