

MANNING INNOVATION AWARDS



PRIX d'INNOVATION MANNING

# INNOVATIS

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*It is difficult to say what is impossible, for the dream of yesterday is the hope of today and the reality of tomorrow.*

*-Robert Goddard*

## High-Tech Detective Tool: Solving Crimes with IBIS



Roman Baldur was 70 years old when he first began work on a computer-enhanced bullet identification system in the early 1990's.

He never dreamed that, eight years later, Manning Innovation Awards would bestow on him its highest honour with the presentation of its \$100,000 Principal Award on November 1, 1999.

Today, Baldur's invention, the Integrated Ballistics Identification System (IBIS) is at work in numerous law enforcement agencies around the world.

With this system, police laboratories have achieved results that were considered impossible only a few short years ago.

Using a laser-guided microscope and digital camera, IBIS works by repeatedly

scanning a bullet or cartridge, analyzing its distinct signature.

IBIS then creates a 360-degree photograph, which is compared against a known database.



Prof. Roman Baldur

During its first few years of operation, IBIS has been able to link seemingly unrelated shootings as well as solve many 'cold' cases.

In addition, IBIS has reduced the time needed to match a bullet to its firearm, from four hours to 30 seconds.

"It's a big step forward

for firearm examiners," says Baldur, an adjunct professor in mechanical engineering at the University of Waterloo.

With many countries also planning on introducing gun registration, IBIS is particularly well suited for the task of cataloging thousands of weapons.

By storing every manufactured gun's bullet and cartridge signature in a computer, IBIS will become a phenomenal asset in solving any weapons crimes of the future.

With projected 1999 sales of \$20 million, IBIS has become an extremely successful Canadian innovation, used in many countries, from Russia to South Africa, Thailand to Turkey.



### *Nominate a Great Canadian Innovator...*

*If you know a deserving innovator, please consider nominating that individual (or team) for a Manning Innovation Award.*

*Nomination forms and additional information about the respective award categories are available from the Foundation's Calgary office or on its website at [www.manningawards.ca](http://www.manningawards.ca).*

*The nominations close February 15, 2000.*

*All nominations are carefully reviewed and evaluated, using outside experts where necessary, with final determination of award winners by the Selection Committee.*

## Decoding the Secrets of Life

Two University of Alberta doctors have won the \$25,000 Manning Award of Distinction, which is sponsored by Southam/Hollinger/Sterling newspapers, for their ground-breaking research into DNA sequencing.

The idea for a high-speed DNA sequencer first occurred to Dr. Norm Dovichi while on a flight to Boston, in 1988.

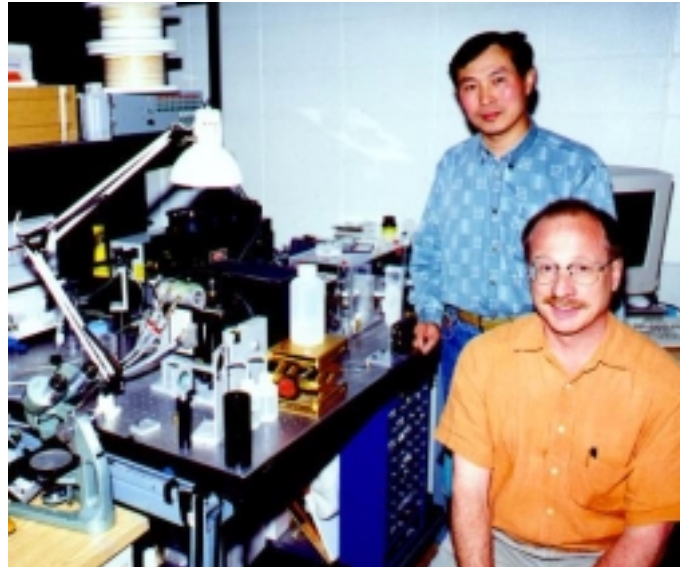
When he returned to Edmonton's University of Alberta, he handed the rough sketch of his idea to Ph.D. student Jianzhong Zhang.

Zhang devoted his entire thesis work into making the high-speed sequencer a reality.

Initially, proposals to create the first prototype were rejected.

The project eventually received funding from a number of sources including the Natural Sciences and Research Engineering Council.

The resulting high-speed sequencer is a first in the world, reducing both time and costs associated with DNA-based analysis.



*Doctors Norman Dovichi (seated) and Jianzhong Zhang in their Edmonton laboratory at the University of Alberta.*

“What used to take days to process, can now be done in under three hours,” says Dovichi.

With the new high-speed model, DNA sequences are produced ten times faster than with previous devices.

With unlimited future applications in the health care industry, the high-speed sequencer is also well suited for use in the International Human

Genome Project.

Using this instrument, researchers predict that the human genetic code will be broken by the year 2001.

With more than 700 units ordered, at a cost of \$300,000 (US) per unit, the high-speed DNA sequencer has already become one of the best-selling medical instruments in the history of biotechnology.



**T**he Manning Innovation Awards, named in honor of the late Ernest C. Manning, former Alberta premier and Canadian senator, was incorporated as a not-for-profit society in 1980 to stimulate, encourage and reward deserving Canadian innovators for their personal accomplishments that have widespread social and economic benefit to Canada.

The annual program continues today with a \$100,000 Principal Award, a \$25,000 Award of Distinction, two \$5,000 Innovation Awards and the \$20,000 Young Canadian Innovation Awards program, shared among eight exhibits selected from entries in the senior division of the national Canada-wide Science Fair.

**We're On The Web**  
[www.manningawards.ca](http://www.manningawards.ca)

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*You imagine that I look back on my life's work with calm and satisfaction...but there is not a single concept of which I am convinced that it will stand firm, and I feel uncertain whether I am on the right track...I don't want to be right – I only want to know whether I am right.*

*– Albert Einstein, when he was 70 years old.*

## New Tool Is Mechanic's Best Friend

Stanley Isbister, a 20-year employee with the City of Saskatoon, has designed a unique socket drive adapter that replaces universal joints and makes the removal or attachment of hard-to-reach nuts and bolts, a simple task.

"The average person could easily find a use for it," says Isbister.


"Mechanics testing my innovation were amazed...it beats any universal joint and saves your knuckles," he adds.

As a result, the patented Gearless Angle Drive has won Popular Mechanic's Editor's Choice Award for the Best New Tool Innovation of 1998 as well as a 1999 \$5,000 Manning Innovation Award, sponsored by the legal firm of Bennett Jones.

"It is an absolutely ingenious development," says Donald Park, executive director of the Manning Innovation Awards. Isbister, who invented the device in his



*Stanley Isbister*

home garage, is delighted with the Manning award as well as the glowing endorsements his gearless angle drive has garnered. 

## Comfort in the Workplace



Edmonton's Tom Van der Weide started his career in the food industry in 1956 as a grocery clerk.

Despite achieving the position of vice-president, he never forgot the discomfort of working and standing long hours on his feet.

In 1996, he retired early to concentrate on developing his invention, the Comfort Plus Anti-Fatigue Mat.

Designed to improve conditions for many employees, who stand on hard surfaces for extended periods of time,

the mat is made of an unusual material that retains 95 per cent of its compression recovery.



*Tom Van der Weide*

The resulting invention is a product that immediately relieves pressure and stress on the back, ankles and legs.

Its unique design works by promoting frequent, small muscle contractions that stimulate blood flow to the feet and legs.

This improved blood flow provides a feeling of comfort, which, in turn, improves morale, attitude and productivity.

Today, the innovative mats are directly marketed to industries that typically sustain fatigued employees, poor productivity, high absenteeism or increased Worker's Compensation Board Claims. 

*Of the real universe,  
we know nothing,  
except that there are as  
many versions of it as  
there are perceptive  
minds.*

–Gerald Bullitt

## Long-Time Selection Committee Member Retires

The Manning Innovation Awards Selection Committee, which operates independently from the Board of Trustees, is comprised of established leaders and authorities from many disciplines across Canada.

The Manning Innovation Awards would like to recognize Jim Hutch, a long-standing member of the Selection Committee.

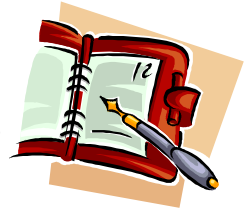
Jim is a resident of Saskatoon as well as the former president of the Saskatchewan Research Council and a distinguished graduate from the University of

Saskatchewan, College of Engineering.

After 12 years of volunteer service to the Selection Committee, Mr. Hutch has decided to retire.

Jim will be recognized during the annual awards ceremony, held in Toronto, on November 1, 1999.

The Manning Innovation Awards Foundation will miss his wise counsel, logic and humour, which were most valuable in the process of selecting the annual award winners.



## Volunteers in the News...

Trustee Gerald Maier and the first chairman of the Selection Committee George Govier were recently inducted into the Petroleum Hall of Fame. Both gentlemen are past presidents of the Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA).

Gerald Maier, APEGGA President for 1978 and Chairman Emeritus of TransCanada PipeLines, was also honoured at the University of Alberta's spring convocation with an honorary degree. Dr. Govier, 1958 APEGGA President, also chaired the Alberta Oil and Gas Conservation Board (now Energy and Utilities Board) for 16 years and was on the board for 30 years. Both Maier and Govier continue to reside in Calgary.

## Can You Help Us?

The Foundation maintains a mailing list of past award recipients, donors, and associates. If you have a change of address, please let us know so we can stay in touch.

Can you help us? We've lost contact with the following award recipients and Manning associates:



Robert Dickie, 1992 Innovation Award recipient  
Yuri Agrawal, 1994 Young Canadian Innovation Award recipient  
Ram Puvanesasingham, 1994 Young Canadian Innovation Award recipient  
Wojciech Giziewicz, 1995 Young Canadian Innovation Award recipient  
Anie Galipeau, 1994 Young Canadian Innovation Award recipient  
Gerald Sutton, former Selection Committee member  
Marie-Josée Drouin, former member of the Board of Trustees

### **Attention: Award Recipients**

Does your company or award winning product have a website you would like listed and linked to on our homepage? If you would like us to link to you, please let us know.