

News Release

\$1 Million Student Project Revolutionizes Math Study

Waterloo Maple Inc.

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Armed with computer laptops and a 1.2 Million Deutsch Marks grant, (\$1 Million Canadian), 28 high school students from Reutlingen, Germany join students from Waterloo Collegiate to work on a project that promises to revolutionize the study of mathematics.

As part of the project, students from Germany are developing their own textbook and their own Math-Abitur (final high school examination). Teacher Michael Komma who is one of five supervisors accompanying the German students says, "We have to re-think the way we test the knowledge of students." He thinks future students will be able to write pre-scientific papers dealing with complex mathematical issues instead of repeating what they have learned in class. He believes this will catapult students to the top on the international scale. He says that until now business had to hire expensive consultants to calculate the variable of new business ventures. "In the future, high school students will be able to do the job," he predicts.

"Canada, especially Waterloo is the cradle of modern Mathematics," explains Dr. Michael Komma, a dedicated Math teacher, researcher and author from the Isolde-Kurz-Gymnasium (high school) in Reutlingen, Germany. The German Ministry of Education in Baden-Wuerttemberg (a province in Southern Germany) has recognized the advantage of using Waterloo Maple's computer algebra system (CAS) software. It has provided a generous grant for this project, and recently acquired a license for Waterloo Maple's CAS Math software for all high schools in Germany's most progressive province. Students from Reutlingen and Waterloo Collegiate will visit Waterloo Maple on Phillip Street Friday, June 5th to discuss issues with the software developers.

"We look forward to hosting these gifted International students and our home-grown talented minds for an afternoon of discussion and networking", Torsten Kahrman, Director, International Sales, Waterloo Maple Inc.

The software tool from Waterloo Maple opens the door to experimental Mathematics.

"Independent work and teamwork motivate students immensely," says Komma. "Students become authors of a unique electronic Math textbook. They become creative and inventive," he says. "It's the creativity which will be most valued in a competitive global economy".

Julia Armbruster is in Grade 12 at the Isolde-Kurz-Gymnasium in Reutlingen, Germany. She is one of 13 girls and 15 boys visiting Waterloo from June 4 to June 12. She says she's been very happy with the project and technology. "I love working at all hours of the day at my own pace to solve real problems using mathematical models."

Motivation is only one by-product. Students in Grade 10 or Grade 11 already deal with complex Math problems normally done at second-year university level. "We solve real problems by using models from physics and business," says Phillip Becker, also in Grade 12, explaining the applied mathematics models. "What used to take hours we can do in seconds," he adds in fluent English.

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The potential of this international student project was recognized by Dr. Herminio Schmidt, Associate Professor Emeritus at Wilfrid Laurier University. He links teachers and students in 66 countries through the IDV-NETZ, an Internet service for the International Teachers' Federation (IDV). "When I realized what Reutlingen was up to," he explains, "it became clear that we had to bring this project to Waterloo."

Schmidt runs a consulting firm and has long-standing contacts with both Waterloo Maple and Waterloo Collegiate Institute (WCI). Both his children went to WCI. His daughter, a University of Waterloo Mathematics graduate is presently working in Germany as a System Analyst. "I'm pleased to reciprocate for the enthusiasm WCI's teachers have instilled in my children," says Schmidt.

Schmidt says Reutlingen and WCI is a perfect match. "In this international joint venture linking school and industry, WCI students benefit from the Germans' experience." They are utilizing their electronic infrastructure, he says, gaining valuable experience. WCI Principal John McCarthy agrees and enthusiastically embraced Schmidt's idea. "This was an opportunity we could not afford to miss," he says.

Schmidt, former chairman of Wilfrid Laurier University's progressive Language Department, and teacher of Business Languages is an avid supporter of "the classroom without walls". This is now possible, he says, by utilizing the Internet intelligently. There are tremendous learning opportunities, he explains. "The Reutlingen-Waterloo Project is only the beginning of further international joint learning ventures."

The study of Mathematics is experiencing a world-wide revolution. This is hastened by the demand of global economy and new technologies. "Today we have to develop ideas for coping with tomorrow's requirements," says Schmidt. "That's why we have to create international alliances with schools and companies."

Waterloo Maple Inc. is a leading producer of mathematical software technology. Over one million users currently use Waterloo Maple's technology. Its products include Maple V, MathView, and Expressionist. To compliment the product line, Waterloo Maple is a key distributor of the MathResource, and Standard Math Interactive. Waterloo Maple Inc. also supplies other software companies with essential mathematical components for leading products such as Mathcad (Mathsoft, Inc.), MATLAB (The MathWorks), Standard Math Interactive (CRC Press), and Scientific Workplace (TCI Research). - 30 - Maple, Maple V, MathView, MathOffice, MathEdge and Expressionist are registered trademarks of Waterloo Maple Inc. Waterloo Maple Inc. recognizes all trademarks and registered trademarks cited in this document.

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