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years, including applications in shipment and driver planning, revenue management, dedicated fleet management and operational decision support. These OR/MS applications have improved annual earnings by more than \$10 million at Schneider – “an outstanding example of OR/MS as an integrated part of a business’ decision-making capability,” according to the prize citation.

Ted Gifford, vice president of Research & Engineering at Schneider National, and Erick Wikum, the company’s director of

Engineering, were on hand to accept the award.

Gifford began by reading a portion of a letter from Schneider President and CEO Chris Lofgren, who was unable to attend the award ceremonies due to a conflict with a company board meeting: Wrote Lofgren: “Art Geoffrion, in a well-known article, states that the purpose of linear programming is insight, not numbers. Within industry, the ultimate purpose is to get results. The Engineering organization at Schneider is measured by its results and

by persistently delivering broad impact across our business units by converting analysis and insight into business values.”

“When you have a transportation company CEO who quotes Art Geoffrion and understands linear programming, it can create great opportunities as well as some interesting challenges,” Gifford said. “Behind Chris’ leadership across the international supply chain, Schneider ... has ensured an environment in which innovation and management science practice have been encouraged to flourish.”

## TRIO SHARE VON NEUMANN THEORY PRIZE



INFORMS President Mark Daskin (far left) and von Neumann Prize Committee Chair Uri Rothblum (far right) congratulate Laszlo Lovasz and Martin Grötschel. Lovasz and Grötschel’s colleague, Alexander Schrijver, could not attend the ceremony.

The 2006 John von Neumann Theory Prize was awarded to Martin Grötschel, László Lovász and Alexander Schrijver for their fundamental path-breaking work in combinatorial optimization. Committee Chair Uri Rothblum made the presentation at the INFORMS annual meeting in Pittsburgh. The von Neumann Theory Prize recognizes scholars who have made fundamental, sustained contributions to theory in operations research and the management sciences.

The citation read in part: “Jointly and individually, [Grötschel, Lovász and Schrijver] have made basic contributions to the analysis and solution of hard discrete optimization problems. In particular, their joint work on geometric algorithms based on the ellipsoid method of Yudin-Nemirovski and Shor showed the great power of cutting-plane approaches to such problems and provided a theoretical justification for the very active field of polyhedral combinatorics. One of the fundamental results was the equivalence

of separation and optimization, discovered independently by three groups of researchers but developed in greatest depth by Grötschel, Lovász and Schrijver.”

Grötschel is a professor in the Technical University of Berlin and vice president of the Konrad Zuse Center for Information Technology. His early work with Manfred Padberg on the symmetric traveling salesman problem was a model for the use of polyhedral combinatorics techniques for

solving hard combinatorial problems. He has continued to work with a large number of his graduate students and other researchers on applying these methods to spinglass problems in statistical physics, to circuit design, to network design, to vertex packing problems with Lovász and Schrijver and to the practical solution of applied problems in the computer and telecommunication industries as well as in public transportation systems. Grötschel served as the president of the German Mathematical Society and is a member of the German (Leopoldina) Academy of Sciences and a Foreign Associate of the U.S. National Academy of Engineering.

Lovász has held positions at universities in Hungary and the United States, as well as at Microsoft Research and is presently the director of the Mathematical Institute of the Eötvös Loránd University in Budapest. He first became well known when he proved the Perfect Graph Conjecture in 1972, at the age of 24. In 1979 he solved a long-standing problem of C.

Shannon in coding theory by assigning vectors to the vertices of a graph and formulating an associated semidefinite programming problem; the approach has since become a powerful tool in attacking combinatorial optimization problems. In 1991, he and Schrijver showed the power of lift-and-project methods in 0-1 integer programming problems and the potential of semidefinite programming techniques to obtain tight relaxations. Lovász has also made key contributions to many topics in graph theory using novel techniques, to randomized algorithms and to submodular function minimization. Lovász will become the president of the International Mathematical Union next year. He is a member of the Hungarian, European, Russian and Dutch Academies of Sciences.

Schrijver is a researcher in the Probability, Networks and Algorithms Group of CWI, the national mathematics and computer science institute in the Netherlands, and a professor at the University of Amsterdam. In addition to the work mentioned above, he has investigated a wide range of hard problems from the theoretical to the applied: sensitivity and total dual integrality in integer programming, routing and timetabling in the Dutch railway system, Lovász’s theta function, certain polynomial homotopic routing problems in VLSI layout and a combinatorial algorithm to minimize submodular functions in strongly polynomial time. Schrijver is known for his impeccable scholarship in his monumental books on the theory of linear and integer programming and on combinatorial optimization. He is a member of the Dutch and German (Leopoldina and Nordrhein-Westfalian) Academies of Sciences.