

*Second Annual E. Leonard Arnoff Memorial Lecture
on the Practice of Management Science*

“Operations Research Applications in the Airline Industry”

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<http://www.lionhrtpub.com/orms/orms-6-00/horner.html>

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7:30 P.M., Thursday, April 29, 1993

This presentation provides an overview of the kinds of operations research applications that exist in the airline industry. American Airlines applications that will be discussed include several Edelman Prize applications. American Airlines estimates the quantifiable benefit at \$1.4 billion over the last three years and expects an annual revenue contribution of over \$500 million to continue into the future with some of the applications.

*Thomas M. Cook
President*

American Airlines Decision Technologies

Thomas M. Cook is president of American Airlines Decision Technologies, a subsidiary of AMR Corporation. Dr. Cook holds an A.B. degree in mathematics from Grinnell College, an MBA from Southern Methodist University, and a Ph.D. in Operations Research from the University of Texas at Austin. He manages both the internal and external consulting activities of Decision Technologies. Decision Technologies is composed of approximately 350 consultants that specialize in modeling, industrial engineering and model-based system development.

Prior to joining American ten years ago, Dr. Cook spent three years consulting for a large international consulting firm, seven years developing large-scale computer based systems for an aerospace corporation and six years teaching and researching at the graduate and undergraduate level. He has coauthored two text books published by Prentice-Hall and has published papers in journals such as *Management Science*, *Decision Sciences*, *Operations Research Quarterly*, *Transportation Research*, *IEEE Transactions*, and *Interfaces*.

Dr. Cook is past president of The Institute of Management Sciences (TIMS), a member of Operations Research of America (ORSA), special editor of *Interfaces*, associate editor for *Operations Research*, and past president of the Airline Group of the International Federation of Operational Research Societies.

Extracted From:

“Lecturers Preach What They Practice”

OR/MS Today, p. 12, August, 1993.

Thomas M. Cook, president of American Airlines Decision Technologies, delivered the second E. Leonard Arnoff Memorial Lecture on Practice in the Management Sciences at the University of Cincinnati.

Arnoff was co-author of the first book in operations research with Wes Churchman and Russ Ackoff. In addition, Arnoff was a long-time employee of Ernst and Whinney, and dean of the College of Business Administration at the University of Cincinnati. This lecture series is sponsored by the Department of Quantitative Analysis and Operations Management at the University of Cincinnati and Omega Rho International Honor Society for operations research, management science, and related areas.

Cook delivered the second Arnoff in April of this year. Several airline professionals were in the crowd of 125 to hear his slide show presentation, ***“Operations Research Applications in the Airline Industry”***. Cook spoke of several interesting areas of research that American Airlines Decision Technologies have applied to the airline industry as well as other similar industries such as bus lines, resorts, etc. He also lectured to a large section of introductory MS/OR students.

The Arnoff Lecture Series is intended to provide a forum to display and recognize excellence in the practice of MS/OR and to bring MS/OR professionals together. ORSA and TIMS members in Cincinnati, Dayton, Lexington, and surrounding areas are encouraged to attend future lectures.

Call (513)556-7140 if you would like to be placed on the mailing list (ground mail or email) for future Arnoff lectures.

“Thomas M. Cook Presents Second Arnoff Memorial Lecture”

by David F. Rogers

Portfolio, University of Cincinnati, College of Business

Administration, Volume 6, p. 16, Fall/Winter, 1993-94.

Thomas M. Cook, Ph.D., President of American Airlines Decisions Technologies, presented ***“Operations Research Applications in the Airline Industry”*** as the second E. Leonard Arnoff Memorial Lecture on Practice in the Management Sciences on April 29 in Lindner Auditorium. Dr. Cook discussed different areas of operations research, such as flight and crew scheduling and overbooking strategies, that have been successfully applied to the airline industry. Similar industries (bus lines, resorts, hotels) also have benefited from their systematic approaches.

Local business professionals in operations research, faculty and students from many local universities and several airline professionals attended the lecture. Many QA students use Dr. Cook’s textbook, Introduction to Management Science; they enjoyed meeting the author and hearing first-hand of his consulting work.

The annual lecture series, named for Dr. E. Leonard Arnoff, former Dean of CBA, provides a forum to display and recognize excellence in the practice of Management Science/Operations Research and to bring professionals in this field together. The lecture series is sponsored by the Department of Quantitative Analysis and Operations Management and the UC Chapter of Omega Rho, the International Honor Society for Operations Research, Management Science, and related areas.