

Yupo Chan, Ph.D., P.E. Fellow (ASCE)
Professor & Founding Chair
Department of Systems Engineering
Donaghey College of Info Sci & Systems Engineering
University of Arkansas, Little Rock, Ar 72204
501-569-8926; Fax 501-569-8698

Principal Publications (Sole Authorship Unless Indicated, * Stands for Second Author, **for Third Author)

Book Publications:

As Sole Author -

Location, Transport and Land-use: Modeling Spatial-temporal Information, Springer, Berlin – New York, 2005, 930 Pages (With Web-based Instructor’s Manual and Software)

Location Theory and Decision Analysis, Thomson/south-western, Cincinnati, 2001, 533 Pages, with Web-based Instructor’s Manual and Software) - Second Edition being typeset

As Editor -

Data Engineering: Mining, Information and Intelligence, Edited by Y. Chan, J. Talburt, and T. Talley (Also Contributing Author), Springer, New York - Berlin, 2010, 447 pp.

Urban Planning and Development Applications of GIS, Edited by S Easa and Y Chan, American Society of Civil Engineers, 2000, 267 pp.

Application of Advanced Operations Research Methods to Mobility Modeling, Editor and Contributing Author, Special Issue of *MILITARY OPERATIONS RESEARCH* Journal, a Joint Publication of the Military Operations Research Society and the Institute for Operations Research and Management Science, 1995, 104 pp.

Facility Location and Land Use: The Urban/rural Dilemma, Editor and Contributing Author, Proceedings, American Society of Civil Engineers, 1986, ISBN 0-87262-574-5, 47 pp.

Refereed Journal Publications:

Network Analysis -

"Configuring a Transportation Route Network via the Method of Successive Approximation," *Computers and Operations Research*, Vol. 1 1974, Pergamon Press, pp. 385-420.

"A Method to Simplify Network Representation in Transportation Planning," *Transportation Research*, Vol. 10, No. C, 1976, Pergamon Press, Pp. 179-192.

"A Graph-theoretic Method to Quantify the Airline Route Authority," *Transportation*, Vol. 8, Elsevier, Netherlands, 1979, Pp. 275-291.

"The Transportation Network Investment Problem: a Survey of Tree Search Solution Algorithms," *Transportation Research Record*, No.1074, National Academy of Sciences, Washington, D.C., 1986, Pp. 32-40.

*"A Time-staged Multi-objective Network-design Model," (With A. El-aroud), *Transportation Planning and Technology*, Vol. 12, 1988, Gordon and Breach, Pp. 189-208.

"The Transportation Network Design Problem - Application of a Hierarchical Search Algorithm (With T. S. Shen* and N. M. Mahaba**), *Transportation Research Record* 1251, National Academy of Sciences, Washington Dc., Pp 24-34. (Also Presented in the 1990 Transportation Research Board Annual Meeting.)

"Exact and Approximate Improvement to the Throughput of a Stochastic Network" (With E Yim, a Marsh) *IEEE Transactions in Reliability*, Vol. 46, No. 4, Pp. 473-486, 1997.

"Improving Information Network Performance: Reliability Vs. Invulnerability" *Transaction of the Institute of Industrial Engineers*, Vol. 31, Issue 9, August 1999, Pp. 909-919 (Second Author With D Lyle and E Head.)

"Detecting a Security Disturbance in Multi-commodity Stochastic Networks." *Telecommunications Systems*, Volume 31, Issue 1, Jan 2006, Pp. 11 - 27. (Second Author With A. R. Robinson, and D. C. Dietz.)

"Stochastic Programming Methods Applied to Network Optimization." *Performance Evaluation*, Vol. 63, Pp. 1005-1015, 2006. (Second Author With X. Liu.)

"User Based Channel Assignment Algorithm in a Load Balanced IEEE 802.11 WLAN" (M. Haidar, H. M. Al Rizzo, Y. Chan, R. Akl) *The International Journal of Interdisciplinary Telecommunications and Networking*, Vol. 1, Issue 2, pp.66 81, 2009.

“Information Security: Designing a Stochastic-network for Throughput And Reliability” Naval Research Logistics, Volume 56, Issue 7, October 2009, pp. 625-641. (J Schavland, Y Chan, R Raines)

Aviation -

"The U.S. Airline Industry: a Taxonomy of Their Managerial Functions and Practices," Transportation Planning Journal, Vol. 4, No. 3, (Ministry of Communications, Taiwan, Republic of China), 1975, pp. 134-154.

"The Small Package Air Freight Industry in the United States: a Review of the Federal Express Experience" (With R. Ponder*), Transportation Research, Vol. 13, Pergamon Press, 1979, Pp. 221-229.

"Airline Deregulation and Service to Small Communities," Transportation Research Record, No. 581, National Academy of Sciences, Washington, D.C., 1982, Pp. 19-37. (Also Presented at the 1982. Transportation Research Board Meeting at Washington D.C.).

"Aviation Legislation and Infrastructure: Policy Implications for the 1980's," Transportation Research Record, No. 958, National Academy of Sciences, Washington, D.C. 1984, Pp.41-50.

Scheduled Systems -

"An Analysis of Internal Transit System Transportation Requirements for Central Cities" (With Systems R.h. Ellis*), Transportation Planning and Technology, Vol. 5, Gordon and Breach, 1978, Pp. 1-11.

"The Probabilistic Multiple-travelling-salesmen Facility-location Problem: Space-filling Curve and Asymptotic Euclidean Analyses" (With Merrill) Military Operations Research, Vol 3, No.2, Pp. 37-53, 1997 (A Joint Publication of the Institute of Operations Research and Management Science and the Military Operations Research Society)[Paper Won the Koopman Prize of Informs]

"A Multiple-depot, Multiple-vehicle, Location-routing Problem With Stochastically Processed Demands" (With Wb Carter* and M Burnes**), Computers & Operations Research, Vol. 28, 2001, Pp 803-826. [The Most Requested Paper of the Journal in 2001]

"The Multiple-depot Multiple-traveling-salesmen Facility-location Problem: Vehicle Range, Service Frequency, and Heuristic Implementations, " (With Steven Baker), Mathematical and Computer Modelling, Vol.41/8-9, 2005, Pp. 1035-1053.

“Stage-wise Solution to a Bicriteria Staff-scheduling Model.” (F. Moeeni, Y. Chan, S. Replogle) Int. J. of Applied Management Science, Vol. 3, No. 1, 2011, pp.52-71.

Technology Assessment -

"Highway Travel and Fuel Consumption Assessment from 1970 to 1980," Transportation Quarterly, Vol. 34, No. 1, Eno Foundation, Saugatuck, Conn, 1985, pp. 39-57.

"Measuring the Efficiency, Effectiveness and Satisfaction of Elderly and Handicapped Transportation Services," Journal of Specialized Transportation Planning and Practice, Vol. 2, Gordon and Breach, 1987, pp. 279-301.

"Real-time Information and Transportation Analysis: an Analysis of Spatial Data" Military Operations Research, Vol I, No 4, Winter 1996, pp 23-48 (A Joint Publication of the Institute of Operations Research and Management Science and the Military Operations Research Society)

**“Budgeting for Facility Maintenance and Repair Ii: a Multi-criteria Process” Journal of Engineering Management, Vol. 15, No. 4, July/August 1999, pp. 84-95, American Society of Civil Engineers (With G Ottoman and B Nixon.)

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"Collaboration in Cyber Transportation Logistics: Paradigms and Technologies." Toh, A. K.; Chan, Y. International Journal of Applied Logistics, Vol. 1, No. 3, 2010, pp. 1–17.

Travel Forecasting -

"Tabulating Demand Elasticities for Forecasting Urban Travel Forecasting" (With F.L. Ou*), Transportation Research Record, No. 673, National Academy of Sciences, Washington D.C., 1978, Pp. 40-46. (Also Presented in the 1977 Annual Transportation Research Board Meeting

*"A Classification of Urban Area for Passenger Travel Forecasting" (With J. Perl), Transportation Engineering Journal, Vol. 105, No. Te5, American Society of Civil Engineers, 1979, Pp. 513-524.

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Facility Location -

*"Forecasting Housing Requirements in a Location College Town" (With W.P. Rasmussen), Journal of the Urban Planning and Development Division, Vol, 105, No. Up1, American Society of Civil Engineers, 1979, Pp. 9-23.

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"Estimating Recreational Travel and Economic Values of State Parks" (With T.O. Carroll*), *Journal of the Urban Planning and Development Division*, 1985, Vol. 111, No.1, American Society of Civil Engineers, Pp. 65-79.

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"Bifurcation and Disaggregation in Lowry-Garin Based Models: Theory, Calibration and Case Study," (With P. Yi), Vol. 20, *Environment and Planning*, Pion, 1988, Pp. 1253-1267.

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Traffic Engineering -

"Inferring an Origin-destination Matrix Engineering Directly from Network Flow Sampling" (With E. Regan* and W. Pan**), *Transportation Planning and Technology*, Vol. 11, Gordon and Breach, 1986, Pp. 27-46.

"Setting Change Intervals at Signalized Intersections" (With T. Liao*),

ITE Journal, Institute of Transportation Engineers, February 1987, Pp. 45-49.

"A Model of Four-way Stop Controlled Intersection Capacity" (With L. Flynn* and K. Stocker**), ITE Journal, Institute of Transportation Engineers, March 1989, pp. 27-34.

*"Estimating an Origin-destination Matrix With Fuzzy Weights - Part I: Methodology", and "Estimating an Origin-destination Matrix With Fuzzy Weights - Part II: Case Studies" (Both With W C Xu), *Transportation Planning and Technology*, Gordon/Breach Vol 17, 1993, Pp 127-163.

"An L_p -norm Origin-destination Estimation Method That Minimizes Site-specific Data Requirements" (With M Y Rahi*), *Transportation Research Record* No. 1413, National Academy of Sciences, Washington Dc. 1993, pp 130-140.

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"A Dynamic Shortest-path Algorithm for Continuous Arc Travel-times: Implication for Traffic Incident Management" (J. Hu and Y. Chan) *Transportation Research Record: Journal of the Transportation Research Board*, No. 2089, Transportation Research Board of the National Academies, Washington, D.C., 2008, pp. 51–57.

Biomedical Engineering -

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*"Time-frequency and Coherence Analysis of fMEG Signals." X. Wu, Y. Chan, H. Preissl, H. Eswaran, J. D. Wilson, P. Murphy, C. L. Lowery. *Neurology and Clinical Neurophysiology* (On Line), Nov. 2004.

"Spatial-temporal Analysis of Fetal Bio-magnetic Signals." P. Soni, Y. Chan, H. Eswaran, J. D. Wilson, P. Murphy, C. L. Lowery. *Journal of Neuroscience Methods*, Vol. 162, 2007, pp. 333–345.

Book Chapters

Y. Chan "Chapter 17 - Visualization and Ontology of Geospatial Intelligence: A Research Agenda." in *Data Engineering: Mining, Information and Intelligence*,

Edited by Y. Chan, J. Talburt, and Terry Talley (pp. 403-429), Springer, New York - Berlin, 2009

Y. Chan, J. Boukachour, C-C Chiang, M. M. Dey, C-H Fredouët, H-P Lo, F. Moeeni, A. K. Toh "Chapter 15 - Cyber Transportation Logistics: Architecting a Global Value-Chain for Services." in *Service Science and logistics Informatics: Innovative Perspectives*, Edited by Zongwei Luo (pp. 217-297), IGI Global, 2010.

Refereed Conference Proceedings Articles:

"Toward a More Rational Airline Route Structure: An Optimization Approach," Proceedings of the Conference on Decision and Control and 11th Symposium on Adaptive Process, Institute of Electrical and Electronics Engineers, 1972, pp. 506-510.

"A Descriptive Economic Model for Rationalizing Airline Route Structures," 1974 Transportation Research Forum Proceedings, pp. 309-320

"The Bicounty Area North of Washington D.C., as a Empirical Study of Transit Improvements in a Suburban Community" (with J. Goodman*), Proceedings of the Inter-Society Conference on Transportation, Los Angeles CA, 1976, Section PNP-7.

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"A Power Planning Model for Seismic Risk Zones" (with J. T. Doan), proceedings of a Technical Session on "Facility Location and Land Use--The Urban/Rural Dilemma," held at the Annual Convention and Exposition at Boston by the American Society of Civil Engineers, ISBN 0-87262-574-5, 1986, pp. 12-25.

"Route-Specific User-Response to Cost and Service Changes: A Case Study of

Scheduled Transportation Systems," Proceedings of the 1989 National Transport Conference, Institution of Engineers, Australia, National Conference Publication No. 87/7 (ISBN 85825 461 1), 1989, pp. 122-127.

"Seismic-Reliability and Environmental-Cost Tradeoffs in Nuclear-Power Distribution Systems: A Model of Obnoxious Facility Location," Proceedings of the International Symposium on Reliability and Maintainability, Union of Japanese Scientists and Engineers, Tokyo, Japan, June 1990, pp. 487-491.

"Computer Graphics for Stochastic Network Analysis in Operational Sciences" (with A. Jaffee* and B. Kottman**), Proceedings of the 4th International Conference on Computer Graphics, American Society of Engineering Education, Miami, Florida, June 1990, pp. 132-140.

"Multicriteria decision making", a tutorial presented at the 59th Military Operations Research Society Symposium, U S Military Academy, West Point, NY, June 1991, 30 pages (in the *Proceedings* of the meeting).

"Remote sensing, geographic information systems, and transportation analysis" in Transportation Congress Volume 2, Proceedings of the 1995 Conference (B K Lall and D L Jones - Editors), American Society of Civil Engineers, pp 1281-1296.

"Modelling joint-mobility problems" (with J Johnson*) a tutorial presented at the 63rd Military Operations Research Society Symposium, Fort Leavenworth, Kansas, June 1996, 30 pages (Part I in *PHALANX*, Vol.29, No.4, pp 6-9, 1996; Part II - Vol. 30, No.4, pp 24-28, 1997)

"Toward an intelligent air transportation system: the role of technology transfer" Chair of panel discussion at the 76th Annual Transportation Research Board Meeting, Washington, DC, Jan 97, published as TRB Circular No. 478, November 1997 (Editor), 20 pages (ISSN 0097-8515).

"An econometric study of interstate vs. intrastate regulatory reform" (with W Cunningham) Pre-prints CD, Annual Transportation Research Board Meeting, January 2000, Washington DC.

"An econometric study of interstate vs. intrastate shipping regulations" Proceedings of the International Chinese Transportation Professionals Meeting, 20-22 February 2000, Hong Kong.

"GIS shapes civil engineering applications" (Easa, S. and Chan, Y.) *Can. Civ. Engr.*, CSCE, 17(3), 2000, 4,5, and 13

“Structuring a Systems Engineering Program at UALR.” (With K. Iqbal, H. Al-Rizzo, & X. Liu), Proceedings of the 12th International Conference of the International Council on Systems Engineering, 2002 (published in CD format), Paper 121.

“Network optimization with stochastic programming: Models and Simulation.” (X. Liu and Y. Chan) Proceedings of IASTED International Conference, Applied Modelling and Simulation, pp. 179-184, Nov. 4-6, 2002 Cambridge, MA. USA

*“Time-Frequency and Coherence Analysis of fMEG Signals.” (With X. Wu, Y. Chan, H. Preissl, H. Eswaran, J. D. Wilson, P. Murphy, C. L. Lowery) Proceedings of the BIOMAG Conference, P1-1, pp. 190-193, Boston, Massachusetts, August 2004.

*“Spatial-Temporal Analysis of Nonstationary fMEG Data.”(With P. Soni, H. Preissl, H. Eswaran, J. D. Wilson, P. Murphy, C. L. Lowery) Proceedings of the BIOMAG Conference, P1-1, pp. 181-183, Boston, Massachusetts, August 2004.

*“Incident Management Program in Central Arkansas: Current Settings and Proposed Extension.” W. Xiao and Y. Chan, Joint 2005 ICTP Annual Conference and NACOTA Annual Technical Symposium, Washington, D.C. January 8-9, 2005, Proceedings, Paper 2.3-5.

“A Multi-Objective Stochastic Programming Model for Resource Allocation in Traffic Incident Management Systems.” W. Xiao, T. Jin, Y. Chan; Paper #1737, 11th World Congress of International Fuzzy Systems Association, July 28-31, 2005, Beijing, China.

“A Performance Model with Reliability Analysis for Mobile Ad Hoc Networks.” X. Liu, Y. Chan; pp. 311-315, Proceedings of the Eleventh ISSAT International Conference on Reliability and Quality in Design, St. Louis, MO; August 4-6, 2005.

“Performance Analysis of Route Discovery in Wireless Ad Hoc Networks: A Unified Model.” X. Liu and Y. Chan. Lecture Notes in Computer Science, Volume 3619, Springer, pp. 314-323; International Conference on Computer Networks and Mobile Computing 2~4 Aug. 2005, Zhangjiajie, China

“A Multi-criteria Routing Model for Incident Management.” *Proceedings, 2005 IEEE International Conference on Systems, Man and Cybernetics*, Waikoloa, Hawaii October 10-12, 2005, pp. 832 - 839 (Second author with J. Hu)

“Stochastic Incident-Management of Asymmetrical Network-Workloads.” J. Hu, Y. Chan, 85th Annual Meeting of the Transportation Research Board, TRB Pre-print 06-1596, Washington D.C. January 22-26, 2006.

“Optimal Load Distribution in Large Scale WLAN Networks Utilizing a Power Management Algorithm,” (M. Haidar, R. Akl, H. Al-Rizzo, Y. Chan, R. Adada). Proceedings of the IEEE Sarnoff Symposium, Session S12, 5 pages, Princeton University, Princeton, New Jersey, 30 April - 2 May 2007.

"Channel Assignment and Load Distribution in a Power-managed WLAN," (M. Haidar, H. M. Al-Rizzo, R. Akl, and Y. Chan). 18th Annual IEEE International Symposium on Personal, Indoor and Mobile Radio Communications, 3-7 September, 2007, Athens, Greece.

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“Dynamic Routing to Minimize Travel Time and Incident Risks.” (J. Hu and Y. Chan) Paper ID 403, Proceedings of the 10th International Conference on Application of Advanced Technologies in Transportation; Athens, Greece, 28-30 May 2008, 14 pages.

"Cyber Transportation Logistics: Analyzing a Global Value chain for Services," (Y. Chan) Transportation and Management Science (Edited by H. P. Lo, S. C. H. Leung, and S. M. L. Tam) Proceedings of the 13th Hong Kong Society of Transportation Studies International Conference, 13 15 December, 2008, Hong Kong, pp. 7 16.

"Predictive Models of Cognitive Outcomes of Developmental Insults." (Y. Chan, N. Bouaynaya, P. Chowdhury, D. Leszczynska, T. A. Patterson, O. Tarasenko) 2009 Proceedings of the Biology, Nanotechnology, and Toxicology International Conference, American Institute of Physics Publisher AIP Conf. Proc. Volume 1229, pp. 87-93.

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from the First-in-first-out Property.” (A. Fowe Y. Chan) Proceedings of the 90th Annual Meeting of the Transportation Research Board, TRB Pre-print 11-2708, Washington D.C. January 23-27, 2011.

“Agile Enterprise Architecture for Cyber Transportation Logistics on Cloud Computing,” (C.-C. Chiang, Y. Chan, A. K. Toh, R. Babiceanu, J. Boukachour, M. M. Dey, C.-H. Fredouët, H.-P. Lo, F. Moeeni) Proceedings of the 6th International Congress on Logistic and SCM Systems (ICLS 2011), March 7-9, 2011, Kaohsiung, Taiwan - Best paper award for the Conference.

"Factors that Influence the Decision-Making Process of Coordinated Distributed Enterprises." (R. F. Babiceanu and Y. Chan) Paper 1274, Proceedings of the 2011 Industrial Engineering Research Conference, May 2011, Reno, Nevada (T. Doolen and E. Van Aken, eds.)

Books and Films Reviews:

"A review of Systems Planning and Design: Case Studies in Modeling, Optimization and Evaluation," R. deNeufville and D. H. Marks, Transportation Research, Vol. 9, Nos. 2/3, September 1975, p. 213.

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"Technical Aspects of Urban Transportation Alternative Analysis," U.S. Dept of Transportation, Urban Mass Transportation Administration," member of review panel, Washington D.C., DOT-UT-90060, 1978, p. 10.

A review of "The Potential to Improve Transit Revenue Yields Through Alternative Pricing Schemes," W.H. Crowell. Appeared in Special Conference Proceedings on Urban Transportation Financing, American Society of Civil Engineers, ISBN 0-87262-241-X, July 1979, pp. 160-161.

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Association for the Advancement of Science, Sep/Oct 1983, p. 52.

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A review of "Why Planes Crash" (film). Coronet Films & Video, in *Science Books and Films*, Vol. 23, No. 2, American Association for the Advancement of Science, Nov/Dec 1987, p. 125.

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Bertuglia, Leonardi, Occelli, Rabino, Tadei, and Wilson (Editors) *Urban Systems: Contemporary Approaches to Modelling*, Croom-Helm, 1987, 677 pp.
Geographical Analysis, Vol 24, No 3, July 1992, pp 281-282.

Francis, McGinnis and White, *Facility Layout and Location*, Second Edition, Prentice Hall, 1992, in Book Review Section of *Interfaces*, an international journal of the Institute of Management Science and the Operations Research Society of America, Vol 23, pp 125-127.

Daskin, *Network and Discrete Location: Models, Algorithms, and Applications*, Wiley-Interscience, 1995 in Book Review Section of *Geographical Analysis*, Vol 28, pp 182-183, Ohio State University Press.

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E. Bekiaris and Y. J. Nakanishi (Editors), *Economic Impacts of Intelligent Transportation Systems: Innovations and Case Studies*, Elsevier, Amsterdam, Netherlands, 2004, 640 pages; in *Journal of Transportation Statistics* - Vol. 8, No. 1, pp.103-104.

Technical Paper Presentations:

Combinatorial Optimization -

"The Transportation Network Investment Problem: A Survey of Tree Search Solution Algorithms," The Pennsylvania Transportation Institute, the Pennsylvania State University, University Park, Pennsylvania, Technical Note 105, 1976. Also presented at the Joint National Meeting of the Operations Research Society of America and the Institute of Management Science, Philadelphia, Pennsylvania, April 1976, 30 pages.

"A Comparative Analysis of Network Aggregation Approaches," presented at the Joint National Meeting of the Operations Research Society of America and the Institute of Management Science, San Francisco, May 1977. Also published as Technical Note 114, Pennsylvania Transportation Institute, the Pennsylvania State University, University Park, Pennsylvania, 1976, 25 pages.

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"Facility Location and Routing - Parts I and II", Poster Session, Specialty Conference on "Hazardous Facilities: How to Site, Permit and Develop" American Society of Civil Engineers, 28-30 August 1988, also presented at the 57th Military Operations Research Symposium at Fort Leavenworth, Kansas, 6-8 June 1989, 60 pages.

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*“An airlift hub-and-spoke location-routing model with time windows: Case study of the CONUS-to-Korea airlift problem” (with D Cox) presented at the 66th Military Operations Research Society Symposium (MORSS), 23-25 June, 1998; Monterey, CA.

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Bogota, Colombia, May 2004.

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