Computer Models
For
Fire and Smoke

Model Name:	ASCOS
Version:	1.12
Classification:	Network air flow analysis
Very Short Description:	ASCOS is a program for steady air flow analysis of smoke control systems.
Modeler(s), Organization(s):	John H. Klote, NIST
User's Guide:	Klote, J.K. and Milke, J.A. 1992. Design of Smoke Management Systems, American Society of Heating, Refrigerating and Air-conditioning Engineers, Atlanta, GA.
Technical References:	Klote, J.K. and Milke, J.A. 1992. Design of Smoke Management Systems, American Society of Heating, Refrigerating and Air-conditioning Engineers, Atlanta, GA.
Validation References:	Klote, J.H. and Bodart, X. 1985. Validation of Network Models for Smoke Control Analysis, ASHRAE Transactions, Vol. 91, Part 2B, pp. 1134-1145.
Availability:	NIST
Price:	Free
Necessary Hardware:	PC 286
Computer Language:	FORTRAN 77
Size:	95 KB
Contact Information:	ASCOS is no longer supported.
Detailed Description:	

ASCOS (Analysis of Smoke Control Systems) is a program for steady air flow analysis of smoke control systems. This program can analyze any smoke control system that produces pressure differences with the intent of limiting smoke movement in building fire situations. The program is also capable of modeling the stack effect created in taller buildings during extreme temperature conditions. The program input consists of the outside and building temperatures, a description of the building flow network and the flows produced by the ventilation or smoke control system. The output consists of the steady state pressures and flows throughout the building. In the 1980s and early 1990s, ASCOS was probably the most extensively used computer program for smoke control analysis in the world, but it is only of historical interest today. Another newer program, CONTAM, is more appropriate most smoke control applications than ASCOS. CONTAM is maintained and updated frequently by Mr. George N. Walton (telephone: (1) + 301-975-6421 or e-mail: george.walton@nist.gov).