CHARACTERIZING CIRCULAR-ARC GRAPHS[1]

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Given a finite family S of nonempty sets, the *intersection graph* $G=G(S)$ has vertices associated with the sets of S and two distinct vertices of G are adjacent if and only if the corresponding sets of S intersect (S is called an *intersection model for* G). If S is a family of arcs on a circle, G is called a *circular-arc graph*. See the example in Figure 1. If, in addition, no arc of S contains another arc, G is called a *proper circular-arc graph* (the graph in Figure 1 is not a proper cir-

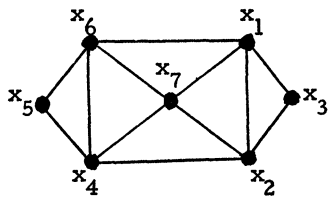

Figure 1a: G

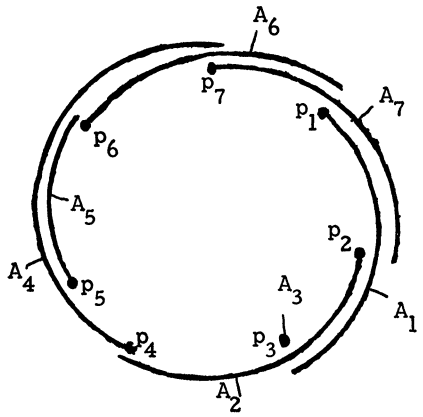

Figure 1b: Circular-arc Model of G

	x_1	x_2	x_3	x_4	x_5	x_6	x_7
x_1	1	1	1	0	0	1	1
x_2	1	1	1	1	0	0	1
x_3	1	1	1	0	0	0	0
x_4	0	1	0	1	1	1	1
x_5	0	0	0	1	1	1	0
x_6	1	0	0	1	1	1	1
x_7	1	1	0	1	0	1	1

Figure 1c: $M^*(G)$ with U_i's and V_i's circled

FIGURE 1

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