APPENDIX

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ABOUT A CONJECTURE ON THE CENTERS OF CHORDAL GRAPHS.

In this section, we discuss a conjecture by Chang [23] on the centers of chordal graphs. Though this is not in our main line of interest, the conjecture came to our attention during our study of centers of d.c.s. graphs and convexity properties of chordal graphs. After the result of Jordan that the center of a tree is either K_1 or K_2, centers of chordal graphs [23],[63] maximal outer planar graphs [65], 2-trees [64], median graphs [56] were also studied.

Though, the center of a connected graph need not be so, it is known [50] that the center of a connected chordal graph is always connected. Also, for a connected chordal graph G, C(G) is m-convex, and diam(G) = 2rad(G), 2rad(G)-1 or 2rad(G)-2. It is also known [63) that diam(C(G)) $\leq$ 3. Consequently, the results in [23] that diam(C(G)) $\leq$ 3 for any connected chordal graph G with diam(G) = 2rad(G)-1 and diam (C(G)) $\leq$ 5 for such graphs with diam(G) = 2rad(G)-2 are less significant.

In [23], Chang has proposed the following,

CONJECTURE: For any connected chordal graph with diam(G) = 2 rad (G)-2, diam (C(G)) ≤ 2.

In [59], we have disproved this conjecture by giving a counter example which can generate a class of such examples. Consider the graph G in Fig A,

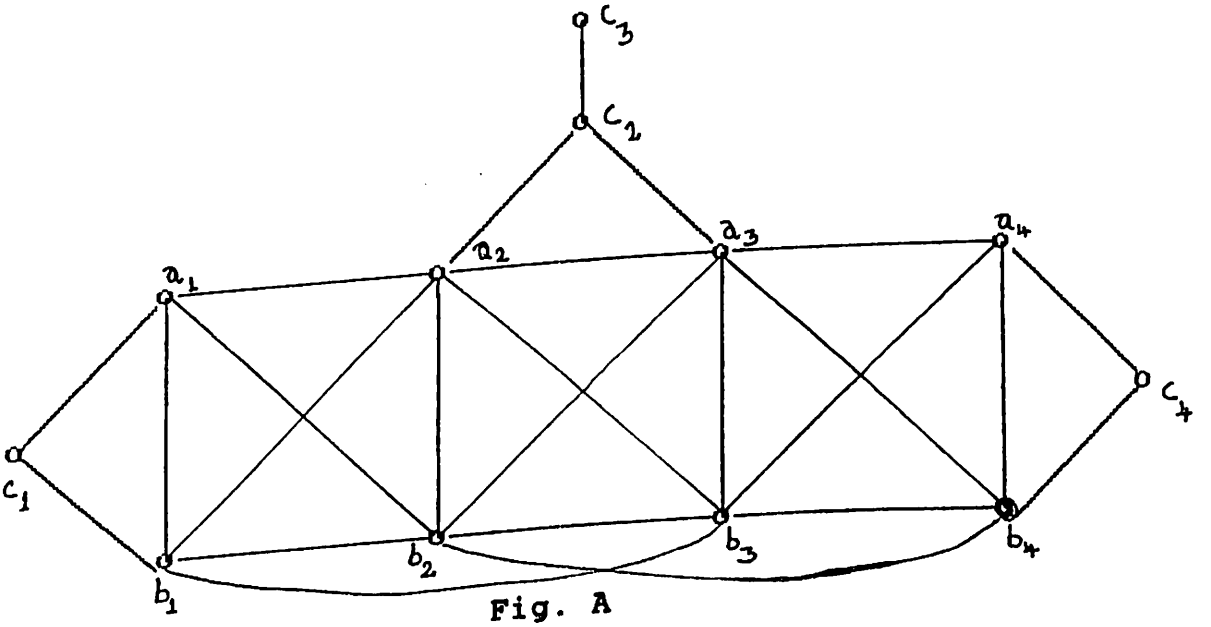

Fig. A

G has (r,d) = (3,4) and diam C(G) = 3. In G, replacing each b_i by a complete graph $K_{ni} = < b_i^1, b_i^2, \ldots, b_i^{ni} >$, and making b_i^j adjacent to b_j^k if b_i is adjacent to b_j and a_i or c_k adjacent to b_i^j if they are adjacent to b_i in G, we can construct a class of graphs which are counter examples to the conjecture.

LIST OF SYMBOLS

A (X)	Arity of X
C (G)	center of G.
Co (A)	convex hull of A
c (X)	Caratheodory number of X
diam (G)	diameter of G
e(u)	eccentricity of u
e(X)	exchange number of X
gin (G)	geodetic iteration number of G.
h(X)	Helly number of X
I (a, b)	Interval between a and b.
Ker (S)	Star center of S.
$\left\lceil \frac{m}{2} \right\rceil$	m/2 if m is even and the integer just greater than m/2 if m is odd.
min (G)	minimal path iteration number of G.
N (u)	The set of all vetices adjacent to u.
N [u]	N (u) U {u}
rad (G)	radius of G
r (X)	Radon number of X
$< S >$	subgraph induced by S
$\lvert V \rvert$	cardinality of V.
$\omega(G)$	Clique number of G.