Density Based Merging Search of Functional Modules in Protein-Protein Interaction (PPI) Networks

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Abstract. [illegible]

Keywords: [illegible]

1 Introduction

[illegible]

* [illegible]

[illegible]

m m

m m

m m m

m m m

m m

m *GN* m *the Hierarchical Clustering.* *HCS* ( ) m m

m *the similarity*

RSNC (

) m m m m

m m m

m m m

m

m m

m m

m m ' m m

m

m m ' m

m

E (m

) m

m

m

( ) m m

m m

m

m m

m m m

E m m

m m

2 The DBMS Algorithm

2.1 The Characteristics of a Complex

m m m

m m m m

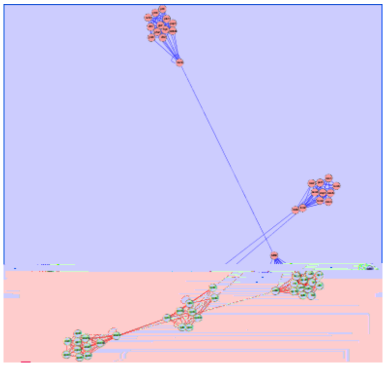
m

m m m m

m mm

m

m



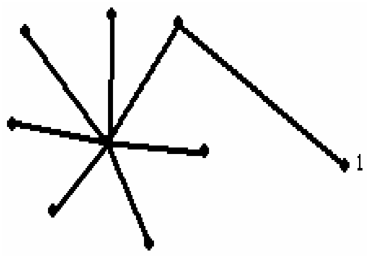


Fig. 1. m **Fig. 2.** m

2.2 The Description of the DBMS Algorithm

$$\rho_p = \left(\sum_{v \in U_p} d_v + d_p\right) \quad d_p \qquad (\ )$$

d_v U_p

m n $S = n$ $d_p = m$

$P \in S$ m ,

$k \leq n$

$k \leq d_p$ $c = k$ n

m $P \in S$ $c \geq \frac{b}{n}$ $P \in S$

$k \geq b$ b

m m n

$b =$ m n f m d_p n

m d_p m n $b =$ n

3 Experiment Results

3.1 The PPI Datasets

3.2 Simulation Results

e $\lambda =$ $f =$ d_p

3.3 Experimental Results on the Real-World PPI Datasets

Table 1. m , E m m

, m m , ,

E ,

m , E ,

m m

m m m

E m

mm m m m

m E

m

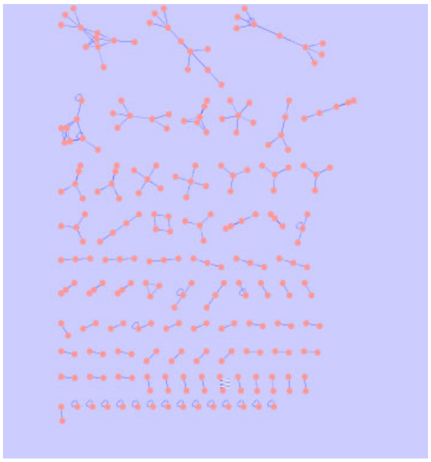


Fig. 3.

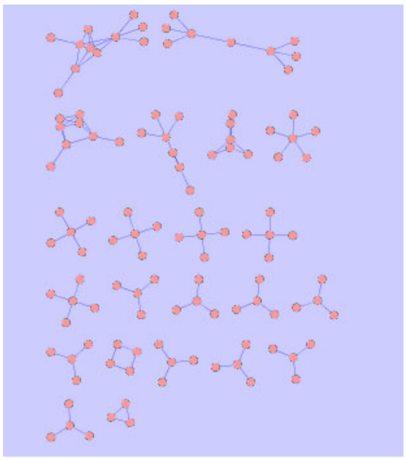


Fig. 4. m

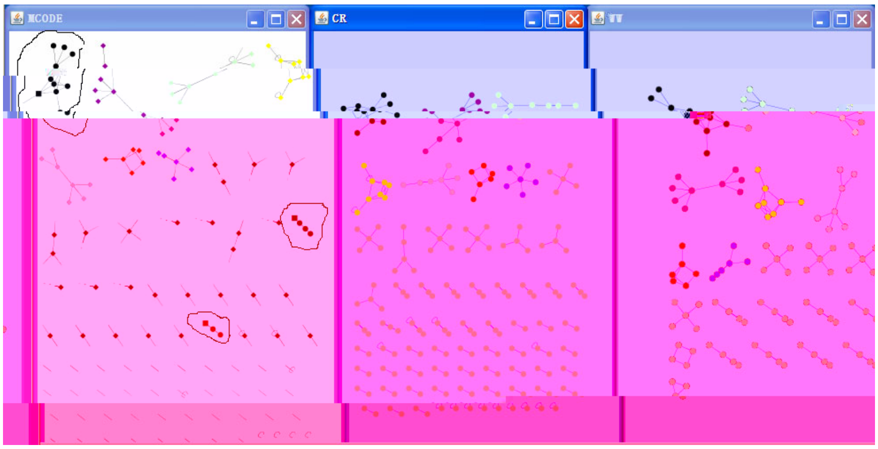


Fig. 5. m E m ( ) m ( ) E m ( ) m ( ) m m

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5 Conclusions

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Acknowledgements

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References

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