

C ₁₁	2	Frequent-1 itemset
C ₁₂	2	
C ₂₁	3	
C ₃₂	4	
C ₄₂	3	
C ₁₁ , C ₃₂	2	Frequent-2 itemset
C ₁₁ , C ₄₂	2	
C ₁₂ , C ₂₁	2	
C ₁₁ , C ₃₂ , C ₄₂	2	Frequent-3 itemset

Table.4 Example of Navigation Patterns

Advantages:

1. By using NPRF method, high quality of image retrieval on RF can be achieved in a small number of feedbacks. The experimental results reveal that NPRF outperforms other existing methods significantly in terms of precision, coverage, and number of feedbacks.
2. This method provides optimal solution to resolve the problems existing in current RF, such as redundant browsing and exploration convergence.
3. NPRF efficiently optimizes the retrieval quality of interactive CBIR.
4. Within a very short term of relevance feedback, the navigation patterns can assist the users in obtaining the global optimal results.

Issues:

1. User's profile needed to be integrated into NPRF to further increase the retrieval quality which is not yet integrated.
2. In view of very large data sets, this technique would need parallel and distributed computing techniques which are also not yet included.

Comparison Points	NPRF	RF(QPM and QEX)
No of user feedback	2	5-6
Average Accuracy	0.85	0.61-0.66
Average Recall	0.2	0.1-0.15
Time Cost	1.176 sec	5.5-6.5 sec

Table.5 Comparison of NPRF and RF

III. CONCLUSIONS

CBIR with relevance feedback strategies has the potential to be at the forefront of the technological movement, reducing the pain of learning for a brand new generation of interactive applications.

This paper has covered some of the recent and eminent relevance feedback techniques explaining their basic architectures, advantages and disadvantages. Much other

related work exists, but the techniques mentioned here – Unified Log Based Feedback, FARF, NPRF are the prime ones and most efficient ones for the current implementation of relevance feedback in CBIR.

A unified log-based relevance feedback provides framework for integrating log data of user feedback with regular relevance feedback for image retrieval. FARF dynamically adapt not only the query parameters and feature weights but also the set of image descriptors (number and type) in order to better fit the user's perception. NPRF works by integrating the navigation pattern mining and a navigation-pattern-based search approach.

It is found that none of the existing approaches meets completely the requirements of an accurate CBIR system with relevance feedback because none of the techniques have completely solved the problem of semantic gap. So it is still undecided what the future truly holds for Improving and implementing Relevance Feedback in real world applications.

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