

# TEAMSEARCH

**:COMPARING TECHNIQUES FOR CO-PRESENT COLLOBORATIVE  
SEARCH OF DIGITAL MEDIA**

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# 1. TeamSearch ?

An application supporting co-present collaborative search of metadata-tagged digital content on an interactive table



# 2. Related Work

UBiTable, RoomPlanner, InteracTable, ConnectTables, SoundTracker.... Etc



UBiTable



Design: GMD-IPSI, Wiege, Wilkhahn

InteracTable

### 3. About TeamSearch



### 3. About TeamSearch

Query :  
"location = Sri Lank AND people = Larry AND  
people=Lisa"



## 4. Evaluation

- ◆ 피 실험자 : 20~30대 남,녀(남녀의 비율은 같다.)
- ◆ 피 실험자 구성 : 4명이 1팀으로 총 4팀
- ◆ 실험 방법 :
  - 두 가지 방법의 query를 사용
  - 각 카테고리는 최대 5개의 값을 가질 수 있다.
  - 한 장의 이미지가 등록 될 수 있는 카테고리는 3개

## 5. Result

- ❖ The quality of the answers found
- ❖ The efficiency of each search technique
- ❖ The impact of each interface on group collaboration
- ❖ User preference data.

## 5.1 Quality

1. Did the chosen set of photos provide complete coverage of each of the twenty metadata values?
2. Quality measure regards the size of the chosen set of photos
  - collective token 의 set size 6.5
  - personal token 의 set size 7.5

## 5.2 Efficiency

1. Total task time in each condition
  - Collective tokens : 12.56minutes
  - Parallel tokens : 11.50minutes
2. Measure of efficiency is to look at the rate of querying
  - rate of querying = total number of queries made / total time
  - Collective tokens : 0.056 queries/sec
  - Parallel tokens : 0.110 queries/sec
3. Perspective on the efficiency issue is to explore not how many queries were made, but how sophisticated each query was.

## 5.3 Collaboration

1. Examining the balance of work among group members is a key aspect of evaluating the system's impact on collaboration.

- Collective tokens : 5.78
- Parallel tokens : 9.09

2. Awareness of other group members' activities is another important aspect of collaboration

	Collective	Parallel
Personally	5.84	11.24
Group	20.38	35.53

## 5.3 Collaboration

3. Participants' subject self-reports regarding various aspects of collaboration.

	Collective tokens	Parallel tokens	P-value
I worked closely with the other members of my group to accomplish this task.	5.75	4.88	$P < 0.04$
Members of the group communicated with each other effectively.	5.75	5	$P \leq 0.05$
The group worked effectively as a team on this task.	5.75	4.81	$p < 0.03$

Collective tokens received higher mean ratings on a 7-point Likert scale regarding their impact on collaboration

## 5.4 Satisfaction

The majority of subjects (10 of 16, 62.5%) reported a preference for the collective interface as compared to the parallel interface.

## 6. Discussion

1. Does either design allow people to reach their search goals more effectively?
2. Does either design facilitate more efficient searching?
3. Does either design promote more effective collaboration among group members?
4. Will users have strong preferences for either of the designs?

## 7. Conclusion

A tabletop application that enables small, co-located groups to search for digital photos from a metadata-tagged repository.