

SEARCH HISTORY

Application Number	PCT/US.16/44537
Search Conducted By	JOG
Search Approved By	PCL

CPC/IPC Classifications Searched	CPC - G06F 17/30864, G06F 17/30398, G06F 17/30595 IPC(8) - G06F 17/30 (2016.01)
Date Conducted	24 September 2016 (24.09.2016)

Documentation Searched	CPC - G06F 17/30864, G06F 17/30398, G06F 17/30595, G06Q 30/02, G06Q 40/00; USPC - 707/759, 707/765, 707/779 (keyword limited; terms below)
Search Terms Used	query optimization graph manipulation data insert delete stream independent lowest cost dataset recursive
Date Conducted	24 September 2016 (24.09.2016)

Electronic Database Searched	PatBase
Files Searched	Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW
Date Conducted	24 September 2016 (24.09.2016)

Search Logic:

- 1) IC=(G06F17/30) (257486)
- 2) CPC=(G06F17/30864) (8890)
- 3) CPC=(G06F17/30398) (679)
- 4) CPC=(G06F17/30595) (1749)
- 5) 1 or 2 or 3 or 4 (258029)
- 6) CPC=(G06Q30/02) (32982)
- 7) CPC=(G06Q40/00) (8856)
- 8) UC=(707/759) (816)
- 9) UC=(707/765) (605)
- 10) UC=(707/779) (218)
- 11) 10 or 9 or 8 or 7 or 6 or 5 (290450)
- 12) 11 and (quer*) (81740)

- 13) 12 and (optim*) (28441)
- 14) 13 and (graph*) (18713)
- 15) 14 and (manipu*) (8557)
- 16) 15 and (data) (8550)
- 17) 16 and (insert*) (4621)
- 18) 17 and (delet* or remov*) (4366)
- 19) 18 and (stream*) (2743)
- 20) 19 and (independ*) (2376)
- 21) 20 and (lowest near cost*) (168)
- 22) 21 and (dataset\$) (8)
- 23) (quer*) and (optim*) and (graph* or manipu* or data or insert* or delet* or remov* or stream* or independ* or dataset\$) (372410)
- 24) 23 and (graph*) (101726)
- 25) 24 and (manipu*) (36731)
- 26) 25 and (data) (34617)
- 27) 26 and (insert*) (20823)
- 28) 27 and (delet* or remov*) (19780)
- 29) 28 and (stream*) (9521)
- 30) 29 and (independ*) (8242)
- 31) 30 and (lowest near cost*) (479)
- 32) 31 and (dataset\$) (24)

Electronic Database Searched	Google
Files Searched	Google Scholar
Date Conducted	24 September 2016 (24.09.2016)
Search Logic:	
<p>About 2,780,000 results (0.04 sec) for query About 594,000 results (0.06 sec) for query optimization About 165,000 results (0.07 sec) for query optimization graph About 36,900 results (0.10 sec) for query optimization graph manipulation About 36,500 results (0.14 sec) for query optimization graph manipulation data About 22,400 results (0.13 sec) for query optimization graph manipulation data insert About 19,400 results (0.16 sec) for query optimization graph manipulation data insert delete About 16,200 results (0.16 sec) for query optimization graph manipulation data insert delete stream About 15,100 results (0.14 sec) for query optimization graph manipulation data insert delete stream independent About 6,320 results (0.13 sec) for query optimization graph manipulation data insert delete stream independent lowest About 12,800 results (0.16 sec) for query optimization graph manipulation data insert delete stream independent lowest cost About 7,200 results (0.18 sec) for query optimization graph manipulation data insert delete stream independent lowest cost dataset About 3,020 results (0.16 sec) for query optimization graph manipulation data insert delete stream independent lowest cost dataset recursive</p>	

Electronic Database Searched	Google
Files Searched	Google Patents
Date Conducted	24 September 2016 (24.09.2016)

Search Logic:

About 186 results (0.86 seconds) for "query optimization" graph manipulation data insert delete stream independent lowest cost dataset recursive

Supplemental Search:

Electronic Database Searched	PatBase
Files Searched	Full-text: AU BE BR CA CH CN DE DK EP ES FI FR GB IN JP KR SE TH TW US WO Bibliographic: (Europe) AT BA BE BG CH CS CY CZ DD DK EE ES FI GE GR HR HU IE IS IT LT LU LV MC MD MT NL NO PL PT RO RS SE SI SK SM TR UA YU (Asia) EA GC HK ID IL IN KZ MN MY PH RU SG SU TH TJ TW UZ VN (North America) CA CR CU DO GT HN MX NI PA SV TT (South America) AR BR CL CO EC PE UY (Australasia) AU NZ (Africa) AP DZ EG KE MA MW OA ZA ZM ZW
Date Conducted	02 October 2016
Search Logic:	
<p>Search 1: query w4 optimiz* (Results 4635) Search 2: 1 and execut8 w4 graph (Results 0) Search 2: 1 and execut* w4 graph (Results 132) Search 3: 2 and query w4 manipul* (Results 10) Search 4: 2 and insertion (Results 25) Search 5: 4 and stream* (Results 18)</p>	

Electronic Database Searched	Google
Files Searched	Web, Scholar with patents
Date Conducted	02 October 2016
Search Logic:	
<p>Scholar; query optimization using an execution graph About 109,000 results (0.13 sec) query optimization using an execution graph query manipulation insertion deletion VAbout 17,000 results (0.21 sec) query optimization using an execution graph query manipulation insertion deletion streaming About 10,100 results (0.17 sec)</p> <p>Web; query optimization using an execution graph V</p> <p>query optimization using an execution graph query manipulation insertion deletion About 676,000 results query optimization using an execution graph query manipulation insertion deletion streaming About 386,000 results</p>	