Friday 27$^{\text{th}}$ April, 2018

Summary

Ran 1000 trials for each of 10%, 25%, 50%, 75%, and 100% cases within 39 relevant fields. Found the case to be minimum for 10% and 100% with brute force. There are in total 3618831 rows, of which 1364624 are distinct. Queries check for the condition $\geqslant \lfloor 1364624 \times P \rfloor$ for some percentage P.

- Minimum QID for 100% case. Size: 35.
  C010：性別、C020：年齡、C032：國籍、C050：婚姻狀況、C060：與戶長關係、C071：教育狀況、C072：教育程度、C073：是否上幼稚園(學齡前兒童)、C081：國語、C082：閩南語、C083：客家語、C084：原住民族語、C085：其他、C091：國語、C092：閩南語、C093：客家語、C094：原住民族語、C095：其他、C100：五年前居住地點、C110：主要家計負責人、C121：工作狀況、C122：行業、C123：職業、C132：工作或求學地點、C141：子女人數、C142：子女居住地點、C151：吃飯、C152：上下床、C153：更換衣服、C154：上廁所、C155：洗澡、C156：在室內外走動、C157：家事活動能力、C160：是否為原住民族、C170：是否為身心障礙.

- Minimum QID size for 10% case. Size: 5.
  C020：年齡、C060：與戶長關係、C072：教育程度、C122：行業、C123：職業
  and
  C020：年齡、C072：教育程度、C122：行業、C123：職業、C141：子女人數.

Results

10% case. Minimal size: 5. # of distinct sizes: 21.

Size	Count	Size	Count	Size	Count
10	111	12	72	6	20
11	96	8	66	21	12
13	89	17	54	22	4
14	85	18	48	**5**	3
15	85	7	43	23	1
9	84	19	30	24	1
16	74	20	21	25	1

25% case. Minimal size: 8. # of distinct sizes: 20.

Size	Count	Size	Count	Size	Count
13	100	19	69	23	15
14	97	11	67	**8**	12
15	96	20	46	24	11
17	92	10	43	26	5
16	86	21	37	25	4
12	84	22	32	27	3
18	74	9	27		

50% case. Minimal size: 10. # of distinct sizes: 21.

Size	Count	Size	Count	Size	Count
20	116	22	65	12	12
18	110	23	60	27	12
19	106	24	48	28	6
17	97	14	47	11	5
21	93	13	27	**10**	1
16	88	25	23	29	1
15	66	26	16	31	1

75% case. Minimal size: 15. # of distinct sizes: 18.

Size	Count	Size	Count	Size	Count
21	119	26	69	29	16
20	109	18	64	32	15
23	98	27	46	16	12
24	95	17	37	**15**	2
22	92	28	31		
25	79	30	25		
19	69	31	22		

100% case. Minimal size: 35. # of distinct sizes: 1.

Size	Count
35	1000