

## Re: 800 Dimensions... Too many?

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*Source:*

<http://www.tech-archive.net/Archive/SQL-Server/microsoft.public.sqlserver.olap/2006-04/msg00180.html>

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- *From:* Bob H. <[BobH@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:BobH@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx)>
  - *Date:* Fri, 7 Apr 2006 10:29:31 -0700
- 

Great – I think I can work with this. My dimensions are all separate tables (800+ dim tables) and my keys are all integers. I can convert all of them to smallint (but not tinyInt – they don't all start at 0 even though no question has more than 20 possible answers).

Thanks!

—

Bob Hodgman

"Jéjé" wrote:

yes, using separated tables for the dimensions is a first step.

I also recommend to use integer (or smallint) for the key column of the table. (if you use string type columns now)

Like:

Answer1 Label DisplayOrder

1 Yes 1

2 No 2

3 Unknown 3

the fact table will have only these integer / smallint / tinyint... values.

this reduce the size of the cube and provides a better process performance.

Sometimes there is a logic in the questions.

Like Question 1 and Question 2 are related (Q1:"do you have a car?"

Q2:"Which model?")

in this case creating a dimension with more than 1 level (1 level by question) will help you.

another option I have created in the past...

some questions become dimensions for classification (like gender, age...)

and some other questions are flattened and put into 1 dimension with 2

levels:

level 1: Question

Level 2: Answer

Re: 800 Dimensions... Too many?

This is good when the user want to see the result of 1 question and don't want to cross analysis multi questions at the same time.  
this design could be good when all the questions uses the same answers, in this case the Answer become 1 dimension and the question another one.

"Akshai Mirchandani [MS]" <akshaim@xxxxxxxxxxxxxxxxxxxxxx> wrote in message [news:O8FOIGeWGHA.3448@xxxxxxxxxxxxxxxxxxxxxxxxxxxx](mailto:news:O8FOIGeWGHA.3448@xxxxxxxxxxxxxxxxxxxxxxxxxxxx)

Yes, lets take a non-survey example:

Country  
\  
State  
\  
City Age  
\  
Customer

If this is your dimension definition, and you want to find the Sales for Customers living in [State].[WA] in the Age group [20-30], you can just say:

```
SELECT [Measures].[Sales] ON 0  
FROM [Sales]  
WHERE  
( Customers.State.WA, Customers.Age.[20-30] )
```

The server will aggregate up the data from the customers that match \*both\* conditions.

The same thing can be done for the survey example except that here the key wouldn't really be a very useful attribute except for the unification of the survey results.

I would suggest building a small sample to prove the concept and then extend it to your full domain.

In addition, I would recommend building the dimensions from real dimension tables where possible so that processing of the dimensions doesn't involve the fact table -- in fact, I would also recommend having integer keys for the yes/no type answers to improve processing speed of the partition data.

Thanks,  
Akshai

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Re: 800 Dimensions... Too many?

"Bob H." <BobH@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message  
news:53C671E1-135F-4157-82D3-5F91015E34F8@xxxxxxxxxxxxxxxxxxxx

The 800 dimensions represent questions on a questionnaire.  
The answers are  
all  
multiple-choice. The answers can be Yes/No/Unknown or an  
item from some  
other  
static list of possible answers (like red/green/blue/pink...).

The purpose of the cube is to allow a group of analysts to  
find out how  
many  
answered "yes" to question #95, "blue" to question #566 and  
"Chocolate  
chip"  
to question #122 (for example).

There are logical groups of questions. Would creating  
combined keys still  
allow the full flexibility to interrogate the data?

Thanks!

--  
Bob Hodgman

"Akshai Mirchandani [MS]" wrote:

My interpretation of the question on  
attributes was: can you group the  
dimensions together into larger entities?

For example, if your 800 dimensions look a  
lot like:

[Flag1], [Flag2], [IsDeleted], [IsAvailable],  
etc.

Then can you combine all these types of  
attributes into somehow logical  
groups and create a dimension that has a  
large composite key attribute  
and  
lots of related attributes with the actual  
flags?

Re: 800 Dimensions... Too many?

Can you give a summary of what your 800 dimensions look like?

Thanks,  
Akshai

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"Bob H."

<BobH@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>

wrote in message

[news:434D5089-8955-4136-94CB-5336D55971DF@xxxxxxxxxxxxxxxxxxxx](mailto:news:434D5089-8955-4136-94CB-5336D55971DF@xxxxxxxxxxxxxxxxxxxx)

Would attributes be more efficient than dimensions?  
I've got this up and running, but the response time is slow (60 seconds to display results).

Visual Studio (2005 – 32-bit Visual Studio on the dual Opteron x64 system) could not deploy the cube (system out of memory!). I had to write scripts and run them through xmla query windows in Management Studio.

Thanks!

--

Bob Hodgman

"Jéjé" wrote:

Re: 800 Dimensions... Too many?

you are  
right... 800  
is really  
huge!!!

does it's  
really  
dimensions  
or  
attributes?  
how the  
system  
performs?

your  
problems  
come from  
the end user  
access, this  
a lot of  
metadata  
to  
play  
with.

"Bob H."

<BobH@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>

wrote in  
message

[news:CE84563F-3528-4504-827A-FDB9EAB163B1@xxxxxxxxxxx](mailto:news:CE84563F-3528-4504-827A-FDB9EAB163B1@xxxxxxxxxxx)

...on  
one  
cube?

I'm  
developing  
in  
SSAS  
2005  
running  
on  
dual  
core  
dual  
Opteron  
64  
bit  
machine.

Re: 800 Dimensions... Too many?

I  
know.  
It  
sounds  
like  
a  
lot  
of  
dimensions.  
But  
sometimes  
the  
world  
is  
really  
complex  
and  
your  
cubes  
get  
complex,  
too.

Anyone  
have  
any  
experience  
with  
this?  
Anyone  
have  
any  
advice  
on  
this.

--  
Bob  
Hodgman

Re: 800 Dimensions... Too many?