

The Rumsfeld Box - 1

		Observations	
		<u>Yes</u>	<u>No</u>
Understanding	<u>Yes</u>	Known Knowns	Unknown Knowns
	<u>No</u>	Known Unknowns	Unknown Unknowns

I was one of the keynote speakers at this year's Training Days event for the Rocky Mountain Oracle User Group (www.rmoug.org), and chose as the title of my talk the claim "Justification is Required".

In the welcome session the night before, I was in the middle of a discussion with Scott Martin of Terlingua on the problems of finding out what you didn't know, when you didn't know what you had to find out. He interrupted me to say "You're beginning to sound like Donald Rumsfeld" – at which point I invented (only slightly tongue in cheek) the Rumsfeld Box and added a couple of slides to my presentation.

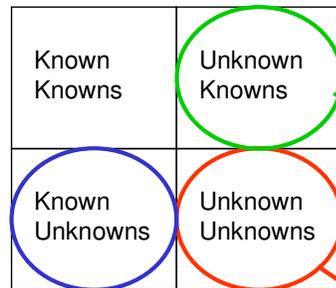
The presentation itself no longer exists (it was just a short set of bullet points I had put together as a backdrop for my talk – as a standalone document it had no cohesive thread), but someone asked me if they could have a note about the Rumsfeld Box. – so here it is, along with a few informal notes that try to explain the idea I was trying to put across at RMOUG.

The box attempts to demonstrate that you can have claims about the behaviour of the database (labelled here as "understanding" – though it's not an ideal label), and observations of events that have actually taken place.

Your mission, at the start of an Oracle project, is to get from the bottom right box to the top left box by whichever route is more efficient for you.

Addendum: 23rd March: I rediscovered a copy of the original presentation, and realised that I had swapped the meaning of Known Unknowns and Unknown Knowns when creating these slides: they are now the right way around.

The Rumsfeld Box - 2



We've picked up some important ideas from somewhere (maybe the Web) – so we need to know if they are correct or relevant. We must test them

We've built some test cases, but we aren't sure what the results mean. We need to work out why we get the results we see – maybe there will be a sound explanation in the manuals or on the Web.

We have no information, and we've done no tests. This is where Oracle projects often start. The trick is to move to the top left hand corner quickly and safely.

To get from a state of total ignorance to a state of total knowledge, you have two routes. Do some prototypes and then try to work out what they mean, or do some reading and decide whether you believe it or need to test it. As with all endeavours there has to be a cost / benefit / risk trade-off. At some point you just have to stop and decide that you've done enough testing, that your understanding is sufficiently sound, and that your critical strategic ideas are therefore probably sound.

A blue route approach: I've read that rebuilding an index improves performance

How was it demonstrated ?

Were there any special circumstances ?

Are there cases where it makes things worse ?

Would those cases matter to us ?

A green route approach : When I rebuilt this index, the queries started running faster

Why did it happen ? Did I see fewer physical reads, less CPU etc ?

What type of queries ?

Would the results be different for different types of queries ?

Did anything else go slower (e.g. inserts, updates, deletes) ?

Would that matter to us ?

Whether you travel by blue or by green:

“understanding” without testing may turn out to be flawed

test results without understanding may be misleading

Skill level

		Competence	
		<u>Yes</u>	<u>No</u>
Comprehension	<u>Yes</u>	Consciously Competent	Consciously Incompetent
	<u>No</u>	Unconsciously Competent	Unconsciously Incompetent

Addendum: 24th March:

In a thread on comp.databases.oracle.server about the Rumsfeld box, Mark Townsend made the following comment on the technique of displaying simple decision trees in a grid-like presentation.

“I too have seen similar grids, one of my favorites had content specific to the Mastery of Weapons, but could also be for Oracle Databases:”

"Consciously Competent".

"Unconsciously Competent",

"Consciously Incompetent",

"Unconsciously Incompetent",

I have taken the liberty of reproducing this grid, because it seems so appropriate to the world of the Oracle professional. In the order above, you have people who:

Know what they are doing and can explain it well

Can *do* the right thing but are unable to explain it.

Know they haven't got a clue, but spout rubbish anyway

(a process commonly known as “marketing”)

Don't understand, and don't realise that what they are saying is wrong.

This example is different from the Rumsfeld box, of course, since there is one state that the serious (non-marketing) professional would not want to pass through.

Driving Skills

		Competence	
		<u>Yes</u>	<u>No</u>
Consciousness	<u>Yes</u>	Consciously Competent (3)	Consciously Incompetent (2)
	<u>No</u>	Unconsciously Competent (4)	Unconsciously Incompetent (1)

Addendum 25th March

It's amazing how the same little square (with the same words, even) can be used in lots of different ways. Shortly after posting the previous addendum, I got a note from Carel-Jan Engel saying:

I use this grid quite often, with a slightly different (more friendly) explanation of the terms. The order is changed as well. It is actually a sequence of 'states' one is going through to get skilled.

1: Unconsciously Incompetent: One doesn't know that one is not competent, but the lack of competency is not missed at all. E.g. a toddler, that isn't aware of how to drive a car, but is not aware of that lack of knowledge either.

2: Consciously incompetent: One feels the need to get the competency, and actually knows one is incompetent. E.g. the teenager, just before the first driving lesson.

3: Consciously competent: The teenager had the first few driving lessons. Every action needs to be thought about quite thoroughly, clutching, shifting gears, accelerating, braking, the teenager has a hard job to do it all the right way.

4: Unconsciously competent. The experienced driver, that operates all the handles and pedals in the car totally automated, without thinking about it.

*In this schema, the order has changed and the **unconsciously competent** state is the best state to reach, not the **consciously competent** state. [Ed: Interesting variation on just a few words, but we agreed that this example probably works best as a list rather than a grid, as it is impossible to arrange for a visually impelling diagonal movement]*