

All.Net Analyst Report and Newsletter

Welcome to our Analyst Report and Newsletter

There's a hole in my bucket...¹

Dear Liza, dear Liza, there's a hole in my bucket, deal Liza a hole!

- *As it turns out, the US didn't have enough COVID-19 test kits early on.*

So fix it dear Henry, dear Henry, dear Henry, So fix it dear Henry, dear Henry so fix it.

- *So why didn't we have more of them?*

With what shall I fix it, deal Liza, dear Liza? With what shall I fix it, deal Liza, with what?

- *Because they were all sold out.*

With straw, dear Henry, dear Henry, dear Henry, With straw, dear Henry, dear Henry with straw.

- *So why didn't we make more of them?*

But the straw is too long, dear Liza, dear Liza, the straw is too long, dear Liza too long.

- *Because we didn't have enough swabs to make them.*

So cut it deal Henry, dear Henry, dear Henry, so cut it dear Henry, dear Henry, so cut it.

- *Why didn't we have enough swabs?*

With what shall I cut it, dear Liza dear Liza, with what shall I cut it, deal Liza with what?

- *Because they were all sold out.*

With a knife, dear Henry, dear Henry, dear Henry, with a knife dear Henry, dear Henry with a knife.

- *Why didn't we make more swabs?*

But the knife is too dull, dear Liza, dear Liza, the knife is too dull, dear Liza too dull.

- *Because we didn't have enough cotton to make the swabs.*

So sharpen it dear Henry, dear Henry, dear Henry, so sharpen it dear Henry, dear Henry, sharpen it.

- *Why didn't we have enough cotton for the swabs?*

With what shall I sharpen it dear Liza dear Liza, with what shall I sharpen it dear Liza with what?

- *Because they were sold out?*

With a stone dear Henry, dear Henry, dear Henry, with a stone dear Henry, dear Henry, with with a stone.

¹ The folks song is titled "There's a hole in my bucket" and it was around when I was a kid and apparently long before. Everything in here not indented is the song... for now.

- *Why didn't we get more of it?*

But the stone is too dry, dear Liza, dear Liza, but the stone is too dry, too dry dear Liza.

- *Because the cotton came from China.*

So wet it dear Henry, dear Henry, dear Henry, so wet it dear Henry, dear Henry, so wet it.

- *So why not get more from China?*

With what shall I wet it dear Liza dear Liza, with what shall I wet it dear Liza with what?

- *Because they are embargoed as part of the Trade war with China*

With water dear Henry, dear Henry, dear Henry, with water dear Henry, dear Henry with water.

- *Why did we embargo this item from China?*

With what shall I fetch it dear Liza dear Liza, with what shall I fetch it, dear Liza with what?

- *Because it was cutting into US production of Cotton.*

With the bucket dear Henry, dear Henry, dear Henry, with the bucket dear Henry, dear Henry, with the bucket.

- *So why don't we produce more Cotton in the US?*

But there's a hole in the bucket dear Liza dear Liza, there's a hole in the bucket dear Liza, a hole...

- *Because everyone is sick or sequestered because of COVID-19!*

Interdependency and supply chain issues

It would be reasonable to ask why it was that we didn't know cotton from China was critical to our survival. The answer is almost certainly simple enough.

- Whoever did the analysis (if there was any) for the restriction of imports failed to take into account the interdependencies of critical needs of the country and identify the risk.
- **OR** after the analysis was done, the decision maker failed to take into account of or decided to accept the risk.

If the interdependencies were accounted for properly, the consequences would have been identified. Given the identified consequences of disease spreading, which top leadership in government and industry are and have long been made aware of on a regular basis, the decision-makers should have a documented basis for doing what turned out to be the wrong thing in hindsight.

But what if they didn't actually know about this?

As it turns out, although we have been advising clients to take these interdependencies into account for at least 20 years, the vast majority of folks we have done baselines for are not doing this. And if they tried to do so, they likely lacked the tools to rapidly get results or update them.

The reason this is so hard to do today is that the tools, until recently, did not exist to rapidly or inexpensively do interdependency analysis automatically in complex long-tailed supply chains.

The DBOM

No – it's not a new type of explosive device!

I first learned about bills of material in the 1970s or 80s, but I'm pretty sure they existed in one form or another since the inception of commercial transportation. The bill of materials (BOM), for those not yet familiar with it, is the list of things that comprise whatever you bought from or sold to someone. It's a parts list, if you like. Used for inventory, checking shipments on departure and arrival, detecting theft and loss, finding out what's missing and being able to order the right part when something is missing or broken (usually by part number), identifying the manufacturer(s), dates of manufacture, etc.

Usually, these things used to come on pieces of paper. But since computers started showing up, the BOM is increasingly digital, leading to the digital bill of materials (DBOM).

Once you recognize that in digital form you can do things other than count and check for existence, the concept of the DBOM explodes into a vast array of possibilities of how to do lots of things better, faster, and cheaper.

So when Chris Blask started talking about this with me, it took less than an instant for us to realize the unlimited potential, and a few days or more of discussions to talk to each other about it and understand more completely the range of possibilities.

The simple ones are the use for interdependency analysis, warnings, and corrections. But there are many more

The DBOM Consortium

Of course we are not the only folks who have had these idea. For example, the "make" program from Unix has been used since the 1970s to identify the dependencies of programs and libraries on each other for automating the build of software from components as those components change. This has gotten far more complex over time, and the software to handle it for automatic updates and installs is increasingly universal.

The evolution of this into a global supply chain methodology and tool was inevitable, but it is now here and rising. Thus the DBOM Consortium. The idea of the consortium is to combine forces of various supply chain members and service organizations to create the ability to determine what a composite is made of, the provenance of the components and recursively of their component parts, all the way to the origin of each, and to identify the properties of each for a wide range of purposes yet to be determined. All of this in a "secure" manner.

Conclusions ... sort of...

There's a hole in your bucket may seem silly, and of course it is that slow step by step analysis of the situation that makes either Liza or Henry or both look dumb. But it's also a lesson to be learned and a technical area to be perfected. It is indeed fundamental to automate this process in the increasingly complex and interdependent world we live in, if you are to understand the implications of decisions.

So join the DBOM Consortium – or embrace the results – and use the force (of automation) to turn to the bright side...

Of course attackers can use this for the dark side as well... ah the equities issue raises it's ugly head yet again.