

Thank you very much, it's an honor to be able to speak to the committee.

My name is Matt Holland. I've got a long background in communicating with the public via the web. I ran the web team at Realnetworks, which was the original audio-over-the-Internet company, in the 90's, and then directed a department at Microsoft where we created that company's first online bookstore. More recently I was the Chief Technical Officer for Avaaz, which is the world's largest online citizen advocacy group, with 45 million members worldwide. I consult with national and international NGO's on effectively using technology to communicate with and mobilize people.

VPIRG engaged my consulting group to take the Act 188 data and present it to the citizens of Vermont in an easy-to-understand, accessible way. It's my understanding that one goal of the law is to empower Vermont's people, by making the information about which products contain chemicals of concern available to them directly.

I've talked to the Department a number of times as the system has developed, I have reviewed the incoming data in depth, and have evaluated a number of different approaches to making it usable and meaningful to an average consumer. I approached it from the perspective of a consumer who is considering a purchase and wants to know "does this item I plan to give to my child contain chemicals of concern, and if so how much is in it?"

My conclusion is that in this data's current form, that is IMPOSSIBLE. But, with minor changes, this system could be a tremendous value to the state's citizens.

slide 2: This is the page on the Department of Health's website which includes the Act 188 information for consumers. The page announces a "Product Search," but as of now only one of the 66 "chemicals of concern" is listed, Toluene. So let's look at the Toluene Data which is linked there..

slide 3: The Toluene Data turns out to be a downloadable spreadsheet. But rather than learning which products contain the chemical, we only get a broad category, called the "brick name", like "Artists Accessories", and an idea of what part of the unnamed products contain the chemical.

slide 4: So for instance we now know that some kind of Surface Coating sold at Michael's Stores contains the chemical we're concerned about. Not much help while we're shopping.

slide 5: But, there *is* data available on exactly which products are affected. Our example Vermont consumer might also discover the Manufacturer's page of the program, and find the Brand Name and Product Model Data Set -- this is where most of the real data is found.

slide 6: Unfortunately it's offered as a set of 70 separate data files, each of which must be downloaded individually. If you want to find a particular product, the citizen has to either search each file, or else compile them together. It took me several hours to create a database of all the information, nearly 2 and a half MILLION rows. This part of the system could be better, but it's not the real problem.

The *real* problem is not about where the data is stored or how it's organized, but about **what data the manufacturers are reporting** in the first place. (Luckily it's also one of the easiest problems to solve.)

slide 7: Here's a look at the data about actual specific products which are reported. You can see that the manufacturers report both a Brand Name and a Product Model for each item. Our consumer is probably not going to know they need to search for a PMKN TAT PAPER 2CT, though. You're not likely to guess what internal shorthand a company uses to refer to the little plastic toy in your hand.

The Department recognized this problem. And in fact on the website it says:

slide 8: ... "Product model numbers are typically the Universal Product Code for the product". That's a great idea by the DOH. It's important because the UPC is a unique identifying number, shown by a barcode, on practically every product sold in a store in America. It's the best way to match the toy in your hand, to the chemical information held by the Department. Unfortunately despite what the webpage says many manufacturers are **not** reporting that UPC at all, and of those who do, nearly all report it in a manner which makes it impossible for a typical consumer to find, as I'll demonstrate in a moment.

slide 9: I've included an example of a UPC here, in case any of the members are not familiar with the terminology. This is the UPC code which would appear on a sticker on this child's shoe, and it uniquely identifies this specific product in national retail databases. Even if you don't know the term, you've certainly seen these codes before, because they are ubiquitous. It's how every checkout counter at every retail store in America works.

slide 10: So here's the problem. These some representative "product models" from the database.

Although the department very helpfully and correctly hopes the manufacturers will report the UPC in the Product Model field, in practice that's the case less than half the time. And as you can see, what they DO choose to report as Product Model is often incomprehensible to a consumer. Finally, in the cases where a UPC **is** reported, various different formats are used, which makes it hard for our example consumer to guess exactly how to search.

slide 11: The data also includes a "Brand Name" field, and in many cases companies mix up these two fields and put product descriptions here instead. But you'll see that these descriptions are also of very little use to a consumer attempting to search for a particular product.

slide 12: We feel a straightforward solution to this whole problem is to add an input field to the DOH reporting form, where manufacturers can enter the UPC code all by itself, and check that it is formatted correctly. This should not require any additional work from the manufacturers who are already reporting this data, but would help make the resulting information actually searchable and usable by consumers.

slide 12:

It's impressive that the state has already collected so much information about these chemicals of concern. There's the *potential* here to provide a terrific value to Vermont consumers. Due to a few small issues in the way Manufacturers are reporting the data though, the information is obscured from consumers. These minor changes in the way the data is reported and made available would make an enormous difference in the value being provided to Vermonters.

Thank you.