

Cybercrime

A perspective on Cellout.me by cyber crime expert Pim Volkers, executive vice president of Fox-IT and co-founder of Verilabs.

Like many other innovations, the ever-growing possibilities in the area of DNA analysis bring about problems. Within the cyber domain, these problems may include artificial intelligence, cyber crime or maybe even terrorism. The similarities between our profession and Genetics lie in the use of computing forces, the recognition of patterns and the protection of data.

If DNA is the new gold, I expect to see a gold rush, like we have seen before in the US and South Africa. The suspected treasures hidden beneath the surface of DNA sequences are so appealing that they will attract all kinds of researchers and entrepreneurs. The first to show up will be the prospectors – the specialists who explore the area of the continuously growing amount of DNA data. Due to the annually increasing capacity of the DNA sequencers, the price of the mapping of the area will go down drastically. There are projects, like in the UK, that aim at sequencing the complete genome of 100,000 people. Though this is revolutionary, and vital if a gold rush is to be triggered, this is only the first step. The area has been localized, but the gold is still hiding in the huge mountain of DNA data. Now, the first, still well organized explorations will take place. The project in the UK is well protected, and it has a clear aim: tracking down the causes of rare hereditary disorders. The access to the goldmine is explicitly controlled.

But in the background, the next group of gold miners is lurking. These miners are less interested in the jackpot (unravelling the genetic background of hereditary diseases), but are aiming for the smaller treasures in the DNA instead. They will focus on collecting the DNA data of as many individuals as possible, and making this data searchable. They will also look for the smaller veins of gold within the big data of our DNA. And that is when we will find out what the true value of the ground in which they are searching, our DNA, really is.

If this value is not clear at when we sell (or hand over) our DNA, we could end up like the farmer who sells his grounds for a small profit, and is then forced to watch as the gold is mined from those grounds.

Why is Google interested in DNA profiles? What can we gather from these profiles, now and in the future? Would you want to (publicly) know the sequences of dangerous viruses – could they be spread by a drone, flying over Dam square on Commemoration Day? What about your privacy with regard to health insurance

companies? Would you even want to know where the weaknesses and strengths in your DNA lie? In short, handing over this information without ensuring the protection of your data will always be a problem deserving of a critical approach.

So what is the best way to protect your data? In any case, make sure it is well encrypted. You should also make sure that your passwords are strong. If you rely on a third party to manage the protection of your data, ask them to clarify things. Make sure you are up to date about their protection policy, and, most importantly, stay critical.